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* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS 1		Web Page for STN Seminar Schedule - N. America
NEWS 2	APR 04	STN AnaVist, Version 1, to be discontinued
NEWS 3	APR 15	WPIDS, WPINDEX, and WPIX enhanced with new predefined hit display formats
NEWS 4	APR 28	EMBASE Controlled Term thesaurus enhanced
NEWS 5	APR 28	IMSRESEARCH reloaded with enhancements
NEWS 6	MAY 30	INPAFAMDB now available on STN for patent family searching
NEWS 7	MAY 30	DGENE, PCTGEN, and USGENE enhanced with new homology sequence search option
NEWS 8	JUN 06	EPFULL enhanced with 260,000 English abstracts
NEWS 9	JUN 06	KOREAPAT updated with 41,000 documents
NEWS 10	JUN 13	USPATFULL and USPAT2 updated with 11-character patent numbers for U.S. applications
NEWS 11	JUN 19	CAS REGISTRY includes selected substances from web-based collections
NEWS 12	JUN 25	CA/CAplus and USPAT databases updated with IPC reclassification data
NEWS 13	JUN 30	AEROSPACE enhanced with more than 1 million U.S. patent records
NEWS 14	JUN 30	EMBASE, EMBAL, and LEMBASE updated with additional options to display authors and affiliated organizations
NEWS 15	JUN 30	STN on the Web enhanced with new STN AnaVist Assistant and BLAST plug-in
NEWS 16	JUN 30	STN AnaVist enhanced with database content from EPFULL
NEWS 17	JUL 28	CA/CAplus patent coverage enhanced
NEWS 18	JUL 28	EPFULL enhanced with additional legal status information from the epoline Register
NEWS 19	JUL 28	IFICDB, IFIPAT, and IFIUDB reloaded with enhancements
NEWS 20	JUL 28	STN Viewer performance improved
NEWS 21	AUG 01	INPADOCDB and INPAFAMDB coverage enhanced
NEWS 22	AUG 13	CA/CAplus enhanced with printed Chemical Abstracts page images from 1967-1998
NEWS 23	AUG 15	CAOLD to be discontinued on December 31, 2008
NEWS 24	AUG 15	CAplus currency for Korean patents enhanced
NEWS 25	AUG 25	CA/CAplus, CASREACT, and IFI and USPAT databases enhanced for more flexible patent number searching
NEWS 26	AUG 27	CAS definition of basic patents expanded to ensure comprehensive access to substance and sequence information

Searched by Jason M. Nolan, Ph.D.

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 NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3,
              AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
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FILE 'HOME' ENTERED AT 08:22:26 ON 02 SEP 2008

=> FIL CAPLUS
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.84       0.84

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FILE COVERS 1907 - 2 Sep 2008  VOL 149 ISS 10
FILE LAST UPDATED: 1 Sep 2008  (20080901/ED)

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=> D SAV
NAME             CREATED      NOTES/TITLE
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ALL11134628/A    16 AUG 2007  2745 ANSWERS IN FILE CAPLUS
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KAREN/A          13 JUL 2007  261 ANSWERS IN FILE CAPLUS
SER10534919/A    08 MAY 2008  761 ANSWERS IN FILE CAPLUS
STRUCTURE3/A     10 OCT 2007  9741 ANSWERS IN FILE CAPLUS
TOTALHITS/A      09 OCT 2007  12338 ANSWERS IN FILE REGISTRY
WHOLESET/A       07 JUL 2007  561 ANSWERS IN FILE CAPLUS


=> ACT SER10534919/A
L1              STR
L2  (     10295)SEA FILE=REGISTRY SSS FUL L1
L3           761 SEA FILE=CAPLUS L2

=> FIL REG
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                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       4.80       5.64

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STRUCTURE FILE UPDATES:    1 SEP 2008  HIGHEST RN 1045602-82-1
DICTIONARY FILE UPDATES:   1 SEP 2008  HIGHEST RN 1045602-82-1

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TSCA INFORMATION NOW CURRENT THROUGH July 5, 2008.

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experimental property data in the original document.  For information
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http://www.cas.org/support/stngen/stndoc/properties.html

=> D SAVE
NAME             CREATED      NOTES/TITLE
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ALL11134628/A    16 AUG 2007  2745 ANSWERS IN FILE CAPLUS
KAREN/A          13 JUL 2007  261 ANSWERS IN FILE CAPLUS
SER10534919/A    08 MAY 2008  761 ANSWERS IN FILE CAPLUS
STRUCTURE3/A     10 OCT 2007  9741 ANSWERS IN FILE CAPLUS
TOTALHITS/A      09 OCT 2007  12338 ANSWERS IN FILE REGISTRY
WHOLESET/A       07 JUL 2007  561 ANSWERS IN FILE CAPLUS


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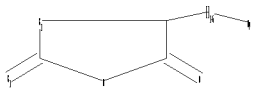

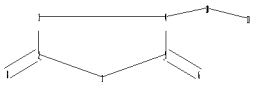

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6 8 10 11
ring nodes :
1 2 3 4 5
chain bonds :
2-8 4-10 5-6 10-11
ring bonds :
1-2 1-5 2-3 3-4 4-5
exact/norm bonds :
1-2 1-5 2-3 2-8 3-4 4-5 4-10 5-6 10-11

G1:C,O,S,N

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 8:Atom 10:CLASS 11:Atom
Generic attributes :
11:
Saturation : Unsaturated

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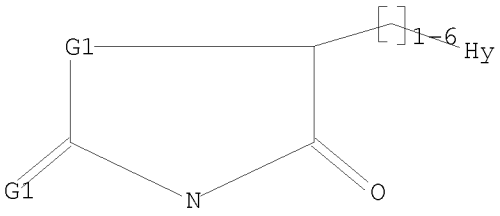
L4 STR



G1 C,O,S,N

Structure attributes must be viewed using STN Express query preparation.

=> S L4
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5.9% PROCESSED 2000 ITERATIONS 23 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 662290 TO 684230
PROJECTED ANSWERS: 6562 TO 8922

L5 23 SEA SSS SAM L4

=> D SCAN

L5 23 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
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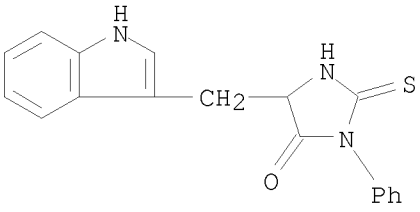

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

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100.0% PROCESSED 679408 ITERATIONS 6362 ANSWERS
SEARCH TIME: 00.00.09

L6 6362 SEA SSS FUL L4

=> FIL CAPLUS
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 182.04 187.68

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FILE COVERS 1907 - 2 Sep 2008 VOL 149 ISS 10
FILE LAST UPDATED: 1 Sep 2008 (20080901/ED)

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=> S L6
L7 1296 L6

=> FIL REG
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 1.44 189.12

FILE 'REGISTRY' ENTERED AT 08:37:53 ON 02 SEP 2008
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STRUCTURE FILE UPDATES: 1 SEP 2008 HIGHEST RN 1045602-82-1
DICTIONARY FILE UPDATES: 1 SEP 2008 HIGHEST RN 1045602-82-1

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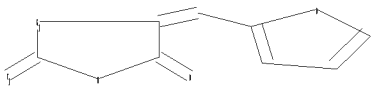

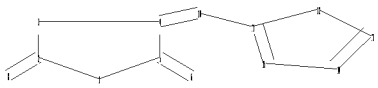

chain nodes :
6 8 10
ring nodes :
1 2 3 4 5 11 12 13 14 15
chain bonds :
2-8 4-10 5-6 10-11
ring bonds :
1-2 1-5 2-3 3-4 4-5 11-12 11-15 12-13 13-14 14-15
exact/norm bonds :
1-2 1-5 2-3 2-8 3-4 4-5 4-10 5-6 10-11 11-12 11-15 12-13 13-14 14-15

G1:C,O,S,N

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 8:Atom 10:CLASS 11:Atom 12:Atom 13:Atom 14:Atom 15:Atom

Searched by Jason M. Nolan, Ph.D.

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L8      STRUCTURE UPLOADED

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L8 HAS NO ANSWERS
L8              STR
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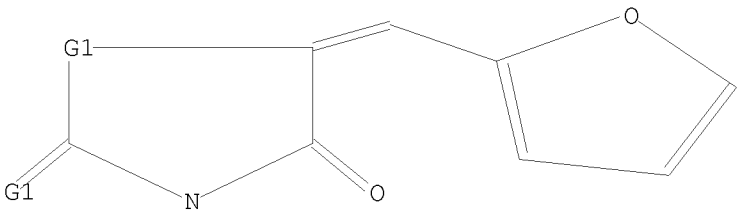


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G1 C,O,S,N


Structure attributes must be viewed using STN Express query preparation.


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FULL SUBSET SEARCH INITIATED 08:38:19 FILE 'REGISTRY'
FULL SUBSET SCREEN SEARCH COMPLETED -      208 TO ITERATE

100.0% PROCESSED      208 ITERATIONS                                0 ANSWERS
SEARCH TIME: 00.00.01

L9             0 SEA SUB=L6 SSS FUL L8

=> S L8 FULL
FULL SEARCH INITIATED 08:38:43 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -    36461 TO ITERATE

100.0% PROCESSED    36461 ITERATIONS                           13753 ANSWERS
SEARCH TIME: 00.00.01

L10        13753 SEA SSS FUL L8

=> D HIS

     (FILE 'HOME' ENTERED AT 08:22:26 ON 02 SEP 2008)

     FILE 'CAPLUS' ENTERED AT 08:24:39 ON 02 SEP 2008
                ACT SER10534919/A
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L1              STR
L2  (     10295)SEA FILE=REGISTRY SSS FUL L1
L3           761 SEA FILE=CAPLUS L2
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     FILE 'REGISTRY' ENTERED AT 08:30:46 ON 02 SEP 2008
L4              STRUCTURE UPLOADED
L5            23 S L4
```

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L6          6362 S L4 FUL

     FILE 'CAPLUS' ENTERED AT 08:36:19 ON 02 SEP 2008
L7          1296 S L6

     FILE 'REGISTRY' ENTERED AT 08:37:53 ON 02 SEP 2008
L8               STRUCTURE UPLOADED
L9             0 S L8 FULL  SUB=L6
L10        13753 S L8 FULL

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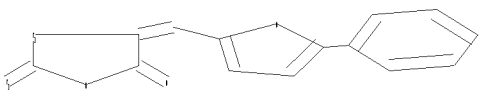

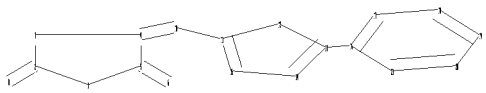

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chain nodes :
6  8  10
ring nodes :
1  2  3  4  5  11  12  13  14  15  16  17  18  19  20  21
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2-8  4-10  5-6  10-11  13-16
ring bonds :
1-2  1-5  2-3  3-4  4-5  11-12  11-15  12-13  13-14  14-15  16-17  16-21  17-18
18-19  19-20  20-21
exact/norm bonds :
1-2  1-5  2-3  2-8  3-4  4-5  4-10  5-6  10-11  11-12  11-15  12-13  13-14  13-16
14-15
normalized bonds :
16-17  16-21  17-18  18-19  19-20  20-21


G1:C,O,S,N

Match level :
1:Atom  2:Atom  3:Atom  4:Atom  5:Atom  6:CLASS  8:Atom  10:CLASS  11:Atom  12:Atom
 13:Atom  14:Atom  15:Atom  16:Atom  17:Atom  18:Atom  19:Atom  20:Atom  21:Atom
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L11 STRUCTURE UPLOADED

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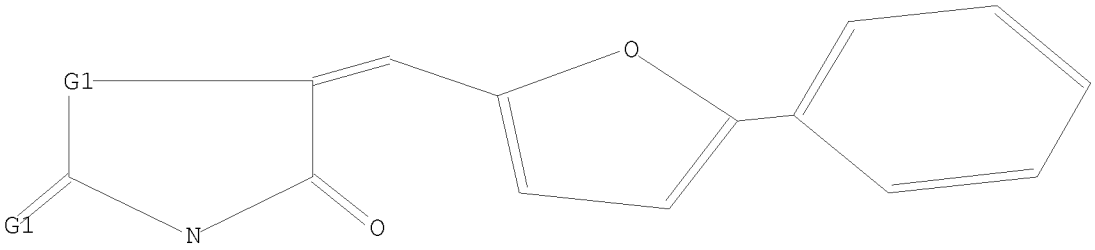
L11 STR



G1 C,O,S,N

Structure attributes must be viewed using STN Express query preparation.

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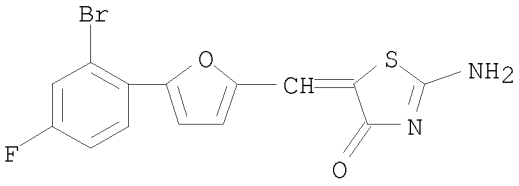
FULL SUBSET SCREEN SEARCH COMPLETED - 9044 TO ITERATE

100.0% PROCESSED 9044 ITERATIONS 8915 ANSWERS
SEARCH TIME: 00.00.01

L12 8915 SEA SUB=L10 SSS FUL L11

=> D SCAN

L12 8915 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
IN 4(5H)-Thiazolone, 2-amino-5-[[5-(2-bromo-4-fluorophenyl)-2-furanyl]methylene]-
MF C14 H8 Br F N2 O2 S

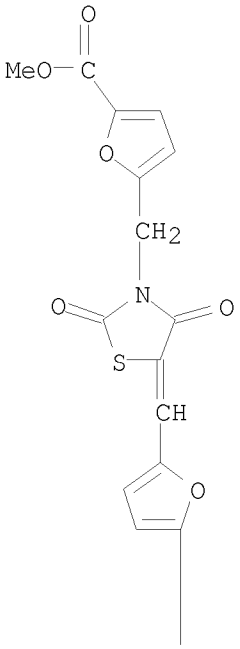


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

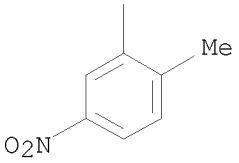
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L12 8915 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
IN 2-Furancarboxylic acid, 5-[[5-[[5-(2-methyl-5-nitrophenyl)-2-furanyl]methylene]-2,4-dioxo-3-thiazolidinyl]methyl]-, methyl ester
MF C22 H16 N2 O8 S

PAGE 1-A



PAGE 2-A



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> FIL CAPLUS

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	266.24	455.36

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FILE LAST UPDATED: 1 Sep 2008 (20080901/ED)

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http://www.cas.org/legal/infopolicy.html

=> D HIS

(FILE 'HOME' ENTERED AT 08:22:26 ON 02 SEP 2008)

FILE 'CAPLUS' ENTERED AT 08:24:39 ON 02 SEP 2008
ACT SER10534919/A

L1 STR
L2 (10295)SEA FILE=REGISTRY SSS FUL L1
L3 761 SEA FILE=CAPLUS L2

FILE 'REGISTRY' ENTERED AT 08:30:46 ON 02 SEP 2008
L4 STRUCTURE UPLOADED
L5 23 S L4
L6 6362 S L4 FUL

FILE 'CAPLUS' ENTERED AT 08:36:19 ON 02 SEP 2008
L7 1296 S L6

FILE 'REGISTRY' ENTERED AT 08:37:53 ON 02 SEP 2008
L8 STRUCTURE UPLOADED
L9 0 S L8 FULL SUB=L6
L10 13753 S L8 FULL
L11 STRUCTURE UPLOADED
L12 8915 S L11 FULL SUB=L10

FILE 'CAPLUS' ENTERED AT 08:43:11 ON 02 SEP 2008

=> S L12
L13 115 L12

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=> S L13 AND COMPOSITION
        735831 COMPOSITION
L14          1 L13 AND COMPOSITION

=> D IBIB

L14  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:         2004:981372  CAPLUS
DOCUMENT NUMBER:          142:274062
TITLE:                    Pharmaceutical composition comprising
                          2-chloro-5-[5-(2-imino-4-oxo-thiazolidin-5-yl
                          idenemethyl)-furan-2-yl]-benzoic acid derivatives for
                          inhibition of protein tyrosine phosphatase 1b activity
INVENTOR(S):              Cho, Jung Myeong; Hwang, Gwang Yeon; Jun, Yeong Ho;
                          Kim, Jin Hwan; Lee, Tae Gyu; Noh, Seong Gu
PATENT ASSIGNEE(S):       Crystalgenomics, Inc., S. Korea
SOURCE:                   Repub. Korean Kongkae Taeho Kongbo, No pp. given
                          CODEN: KRXXA7
DOCUMENT TYPE:            Patent
LANGUAGE:                 Korean
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
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     KR 2003095730         A     20031224    KR 2002-33284           20020614
PRIORITY APPLN. INFO.:                       KR 2002-33284           20020614


=> D IBIB ABS HITSTR L14

L14  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:         2004:981372  CAPLUS
DOCUMENT NUMBER:          142:274062
TITLE:                    Pharmaceutical composition comprising
                          2-chloro-5-[5-(2-imino-4-oxo-thiazolidin-5-yl
                          idenemethyl)-furan-2-yl]-benzoic acid derivatives for
                          inhibition of protein tyrosine phosphatase 1b activity
INVENTOR(S):              Cho, Jung Myeong; Hwang, Gwang Yeon; Jun, Yeong Ho;
                          Kim, Jin Hwan; Lee, Tae Gyu; Noh, Seong Gu
PATENT ASSIGNEE(S):       Crystalgenomics, Inc., S. Korea
SOURCE:                   Repub. Korean Kongkae Taeho Kongbo, No pp. given
                          CODEN: KRXXA7
DOCUMENT TYPE:            Patent
LANGUAGE:                 Korean
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
     KR 2003095730         A     20031224    KR 2002-33284           20020614
PRIORITY APPLN. INFO.:                       KR 2002-33284           20020614
AB   Provided is a pharmaceutical composition comprising 2-chloro-5-[5-(2-imino-4-
     oxo-thiazolidin-5-yl idenemethyl)-furan-2-yl]-benzoic acid derivs. to
     inhibit the activity of protein tyrosine phosphatase 1B(PTP 1B).  It
     effectively inhibits the activity of PTP 1B and is thus used for the
     prevention and treatment of obesity or diabetes.  A pharmaceutical composition
```
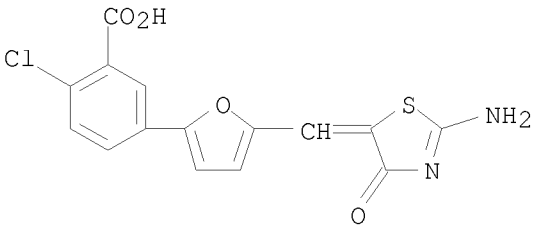
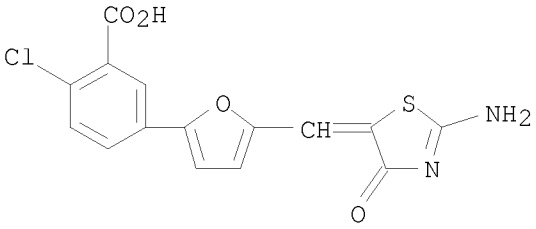

for the inhibit the activity of protein tyrosine phosphatase 1B(PTP 1B) is characterized by comprising 2-chloro-5-[5-(2-imino-4-oxo-thiazolidin-5-yl idenemethyl)-furan-2-yl]-benzoic acid derivs., their pharmaceutically acceptable salt, hydrate, solvate or isomer. In the formula, R1 is an aromatic group substituted or unsubstituted with at least one of halogen, alkyloxy, alkyl, amino, alkyl amino, carboxylic acid or amide; a nitrogen, sulfur or oxygen-containing aromatic group; or an aromatic group substituted or unsubstituted C1-C6 alkyl, and R2 is hydrogen; an aromatic group substituted or unsubstituted with at least one of halogen, alkyloxy, alkyl, amino, alkylamino, carboxylic acid or amide; a nitrogen, sulfur or oxygen-containing aromatic group; or an aromatic group substituted or unsubstituted C1-C6 alkyl, and R2 is hydrogen.

IT 401611-95-8 401611-95-8D, derivs.
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmaceutical composition comprising furan benzoic acid derivs. for inhibition of protein tyrosine phosphatase 1b activity)

RN 401611-95-8 CAPLUS
CN Benzoic acid, 5-[5-[(2-amino-4-oxo-5(4H)-thiazolylidene)methyl]-2-furanyl]-2-chloro- (CA INDEX NAME)



RN 401611-95-8 CAPLUS
CN Benzoic acid, 5-[5-[(2-amino-4-oxo-5(4H)-thiazolylidene)methyl]-2-furanyl]-2-chloro- (CA INDEX NAME)



=> FIL REG

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	16.94	472.30

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-0.80	-0.80

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FILE 'REGISTRY' ENTERED AT 08:53:37 ON 02 SEP 2008
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STRUCTURE FILE UPDATES:    1 SEP 2008  HIGHEST RN 1045602-82-1
DICTIONARY FILE UPDATES:   1 SEP 2008  HIGHEST RN 1045602-82-1

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TSCA INFORMATION NOW CURRENT THROUGH July 5, 2008.

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REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=> D HIS

     (FILE 'HOME' ENTERED AT 08:22:26 ON 02 SEP 2008)

     FILE 'CAPLUS' ENTERED AT 08:24:39 ON 02 SEP 2008
                ACT SER10534919/A
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L1              STR
L2  (     10295)SEA FILE=REGISTRY SSS FUL L1
L3          761 SEA FILE=CAPLUS L2
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     FILE 'REGISTRY' ENTERED AT 08:30:46 ON 02 SEP 2008
L4              STRUCTURE UPLOADED
L5           23 S L4
L6         6362 S L4 FUL

     FILE 'CAPLUS' ENTERED AT 08:36:19 ON 02 SEP 2008
L7         1296 S L6

     FILE 'REGISTRY' ENTERED AT 08:37:53 ON 02 SEP 2008
L8              STRUCTURE UPLOADED
L9            0 S L8 FULL  SUB=L6
L10       13753 S L8 FULL
L11             STRUCTURE UPLOADED
L12        8915 S L11 FULL  SUB=L10

     FILE 'CAPLUS' ENTERED AT 08:43:11 ON 02 SEP 2008
L13         115 S L12
L14           1 S L13 AND COMPOSITION

     FILE 'REGISTRY' ENTERED AT 08:53:37 ON 02 SEP 2008
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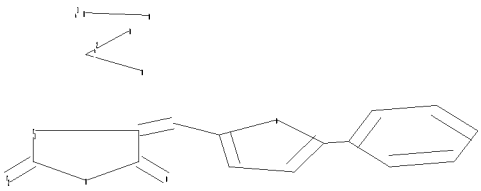

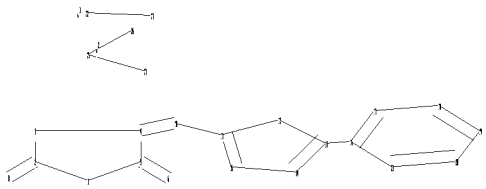

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ring nodes :
1 2 3 4 5 11 12 13 14 15 16 17 18 19 20 21
chain bonds :
2-8 4-10 5-6 10-11 13-16 22-23 25-26 25-27
ring bonds :
1-2 1-5 2-3 3-4 4-5 11-12 11-15 12-13 13-14 14-15 16-17 16-21 17-18
18-19 19-20 20-21
exact/norm bonds :
1-2 1-5 2-3 2-8 3-4 4-5 4-10 5-6 10-11 11-12 11-15 12-13 13-14 13-16
14-15 22-23 25-26 25-27
normalized bonds :
16-17 16-21 17-18 18-19 19-20 20-21

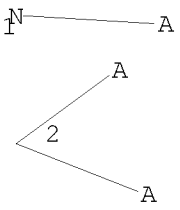
G1:C,O,S,N

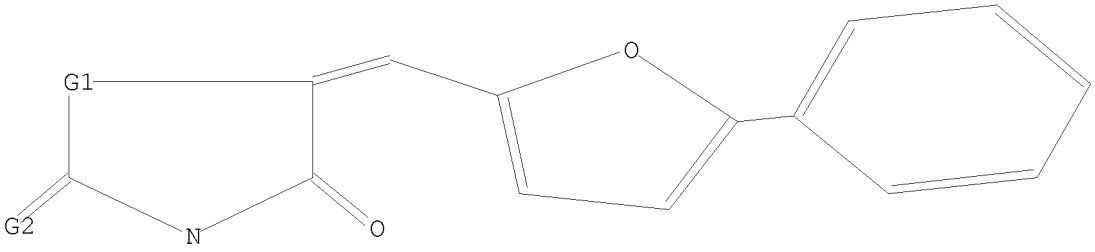
G2:O,S,[*1],[*2]

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 8:Atom 10:CLASS 11:Atom 12:Atom
13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom 20:Atom 21:Atom
22:CLASS 23:CLASS 25:CLASS 26:CLASS 27:CLASS

L15 STRUCTURE UPLOADED

=> D
L15 HAS NO ANSWERS
L15 STR





G1 C,O,S,N

G2 O,S,[@1],[@2]

Structure attributes must be viewed using STN Express query preparation.

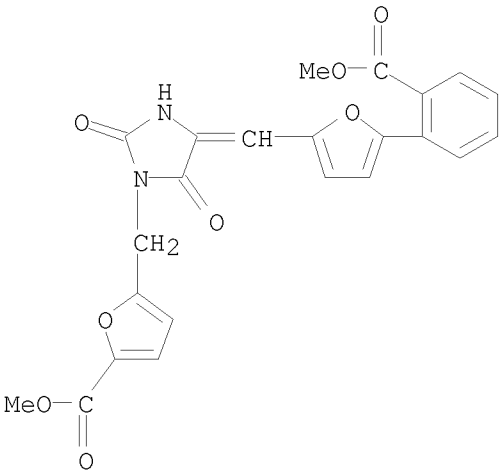
=> S L15 FULL SUB=L10
FULL SUBSET SEARCH INITIATED 08:54:30 FILE 'REGISTRY'
FULL SUBSET SCREEN SEARCH COMPLETED - 9040 TO ITERATE

100.0% PROCESSED 9040 ITERATIONS 6095 ANSWERS
SEARCH TIME: 00.00.01

L16 6095 SEA SUB=L10 SSS FUL L15

=> D SCAN

L16 6095 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
IN 2-Furancarboxylic acid, 5-[[4-[[5-[2-(methoxycarbonyl)phenyl]-2-furanyl]methylene]-2,5-dioxo-1-imidazolidinyl]methyl]-, methyl ester
MF C23 H18 N2 O8



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> FIL CAPLUS

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	43.48	515.78

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-0.80

FILE 'CAPLUS' ENTERED AT 08:55:17 ON 02 SEP 2008
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FILE COVERS 1907 - 2 Sep 2008 VOL 149 ISS 10
FILE LAST UPDATED: 1 Sep 2008 (20080901/ED)

Caplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2008.

Effective October 17, 2005, revised CAS Information Use Policies apply.
They are available for your review at:

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=> S L16
L17 107 L16

=> D IBIB ABS HISTSR 107
'HISTSR' IS NOT A VALID FORMAT FOR FILE 'CAPLUS'

The following are valid formats:

ABS --------- GI and AB
ALL --------- BIB, AB, IND, RE
APPS -------- AI, PRAI
BIB --------- AN, plus Bibliographic Data and PI table (default)
CAN --------- List of CA abstract numbers without answer numbers
CBIB -------- AN, plus Compressed Bibliographic Data
CLASS ------- IPC, NCL, ECLA, FTERM
DALL -------- ALL, delimited (end of each field identified)
DMAX -------- MAX, delimited for post-processing
FAM --------- AN, PI and PRAI in table, plus Patent Family data
FBIB -------- AN, BIB, plus Patent FAM
IND --------- Indexing data
IPC --------- International Patent Classifications
MAX --------- ALL, plus Patent FAM, RE
PATS -------- PI, SO
SAM --------- CC, SX, TI, ST, IT
SCAN -------- CC, SX, TI, ST, IT (random display, no answer numbers;
SCAN must be entered on the same line as the DISPLAY,
e.g., D SCAN or DISPLAY SCAN)
STD --------- BIB, CLASS

IABS -------- ABS, indented with text labels
IALL -------- ALL, indented with text labels
IBIB -------- BIB, indented with text labels
IMAX -------- MAX, indented with text labels
ISTD -------- STD, indented with text labels

OBIB -------- AN, plus Bibliographic Data (original)
OIBIB ------- OBIB, indented with text labels

SBIB -------- BIB, no citations
SIBIB ------- IBIB, no citations

HIT --------- Fields containing hit terms
HITIND ------ IC, ICA, ICI, NCL, CC and index field (ST and IT)
containing hit terms
HITRN ------- HIT RN and its text modification
HITSTR ------ HIT RN, its text modification, its CA index name, and
its structure diagram
HITSEQ ------ HIT RN, its text modification, its CA index name, its
structure diagram, plus NTE and SEQ fields
FHITSTR ----- First HIT RN, its text modification, its CA index name, and
its structure diagram
FHITSEQ ----- First HIT RN, its text modification, its CA index name, its

structure diagram, plus NTE and SEQ fields
KWIC -------- Hit term plus 20 words on either side
OCC --------- Number of occurrence of hit term and field in which it occurs

To display a particular field or fields, enter the display field codes. For a list of the display field codes, enter HELP DFIELDS at an arrow prompt (=>). Examples of formats include: TI; TI,AU; BIB,ST; TI,IND; TI,SO. You may specify the format fields in any order and the information will be displayed in the same order as the format specification.

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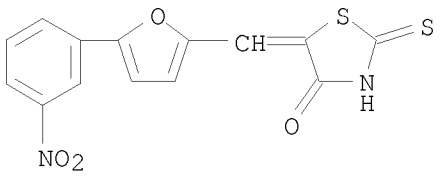
ENTER DISPLAY FORMAT (BIB):END

=> D IBIB ABS HITSTR L17 107

L17 ANSWER 107 OF 107 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1972:59507 CAPLUS
DOCUMENT NUMBER: 76:59507
ORIGINAL REFERENCE NO.: 76:9589a,9592a
TITLE: Furan derivatives XXIV. Synthesis of substituted 5-(5-phenyl-2- furfurylidene)rhodanines
AUTHOR(S): Krutosikova, A.; Frimm, R.; Kovac, J.
CORPORATE SOURCE: Inst. Org. Chem., Slovak Tech. Univ., Bratislava, Czech.
SOURCE: Sbornik Prac Chemickej Fakulty SVST (1971), Volume Date 1969-1970 55-8
CODEN: SCFSAL; ISSN: 0520-7339
DOCUMENT TYPE: Journal
LANGUAGE: Slovak
GI For diagram(s), see printed CA Issue.
AB With the object of preparing biol. active agents of low toxicity, title compds. (I) were prepared by boiling a mixture of the appropriately substituted 5-phenyl-2-furaldehyde, rhodanine, and AcONa in AcOH 30 min. The following I were prepared (R and % yield given): 4-O2N, 81; 3-O2N, 87; 2-O2N, 92; 4-HO2C, 87; 4-Cl, 86; 4-Br, 77; 4-EtO2C, 80; H, 92; 4-Me, 49; 4-MeO, 51.
IT 35274-35-2P 35274-36-3P 35274-37-4P
35274-38-5P 35274-39-6P 35274-40-9P
35274-41-0P 35274-42-1P 35386-81-3P
36405-07-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 35274-35-2 CAPLUS
CN 4-Thiazolidinone, 5-[[5-(3-nitrophenyl)-2-furanyl]methylene]-2-thioxo- (CA INDEX NAME)



RN 35274-36-3 CAPLUS
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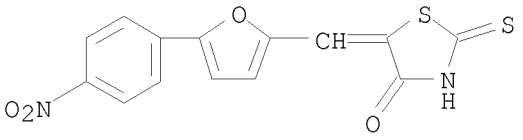
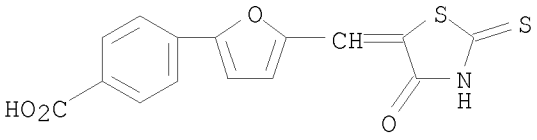


RN 35274-37-4 CAPLUS
CN Benzoic acid, 4-[5-[(4-oxo-2-thioxo-5-thiazolidinylidene)methyl]-2-furanyl]- (CA INDEX NAME)



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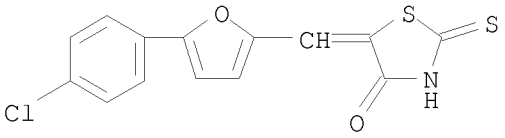

RN 35274-39-6 CAPLUS
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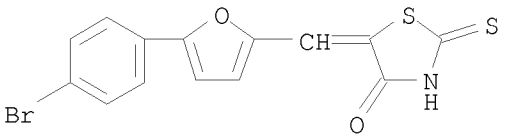

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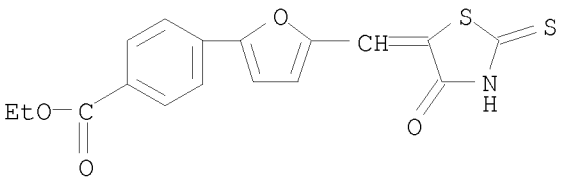

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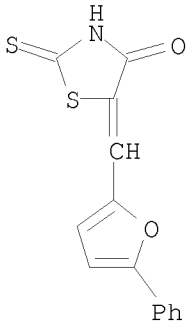

RN 35274-42-1 CAPLUS
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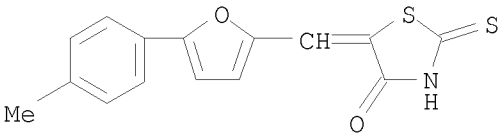

RN 35386-81-3 CAPLUS
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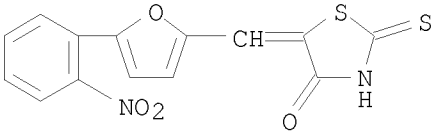

RN 36405-07-9 CAPLUS
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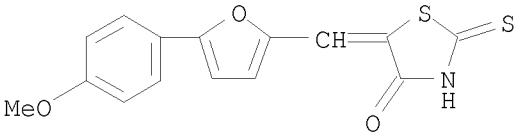

=> FIL REG

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	8.81	524.59

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-0.80	-1.60

FILE 'REGISTRY' ENTERED AT 08:59:19 ON 02 SEP 2008
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Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 1 SEP 2008 HIGHEST RN 1045602-82-1
DICTIONARY FILE UPDATES: 1 SEP 2008 HIGHEST RN 1045602-82-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH July 5, 2008.

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

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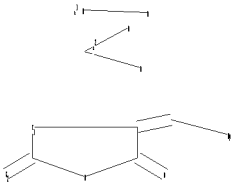
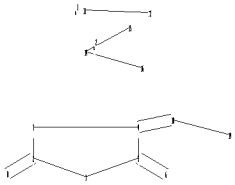




chain nodes :
6 8 10 11 12 14 15 16 19
ring nodes :
1 2 3 4 5
chain bonds :
2-8 4-10 5-6 10-19 11-12 14-15 14-16
ring bonds :
1-2 1-5 2-3 3-4 4-5
exact/norm bonds :
1-2 1-5 2-3 2-8 3-4 4-5 4-10 5-6 10-19 11-12 14-15 14-16

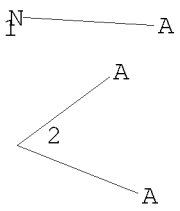
G1:C,O,S,N

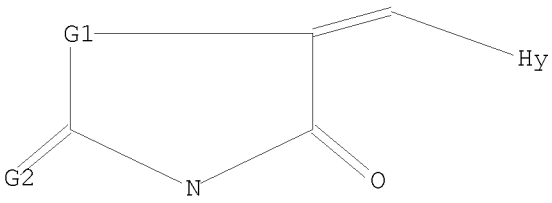
G2:O,S,[*1],[*2]

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 8:Atom 10:CLASS 11:CLASS
12:CLASS 14:CLASS 15:CLASS 16:CLASS 19:Atom
Generic attributes :
19:
Saturation : Unsaturated

L18 STRUCTURE UPLOADED

=> D
L18 HAS NO ANSWERS
L18 STR





G1 C,O,S,N
G2 O,S,[@1],[@2]

Structure attributes must be viewed using STN Express query preparation.

=> S L18
SAMPLE SEARCH INITIATED 08:59:36 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 30616 TO ITERATE

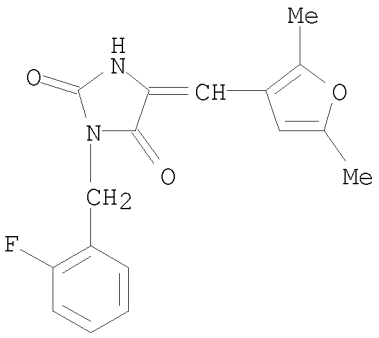
6.5% PROCESSED 2000 ITERATIONS 50 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 601855 TO 622785
PROJECTED ANSWERS: 47799 TO 53845

L19 50 SEA SSS SAM L18

=> D SCAN

L19 50 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN
IN 2,4-Imidazolidinedione, 5-[(2,5-dimethyl-3-furanyl)methylene]-3-[(2-fluorophenyl)methyl]-
MF C17 H15 F N2 O3



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> S L18 FULL
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FULL SCREEN SEARCH COMPLETED - 617712 TO ITERATE

100.0% PROCESSED 617712 ITERATIONS 50859 ANSWERS
SEARCH TIME: 00.00.08

L20 50859 SEA SSS FUL L18

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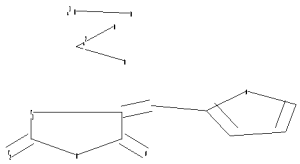
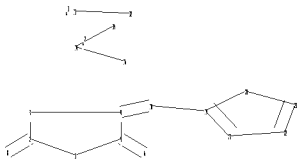




chain nodes :
6 8 10 11 12 14 15 16
ring nodes :
1 2 3 4 5 19 20 21 22 23
chain bonds :
2-8 4-10 5-6 10-19 11-12 14-15 14-16
ring bonds :
1-2 1-5 2-3 3-4 4-5 19-20 19-23 20-21 21-22 22-23
exact/norm bonds :
1-2 1-5 2-3 2-8 3-4 4-5 4-10 5-6 10-19 11-12 14-15 14-16 19-20 19-23
20-21 21-22 22-23

G1:C,O,S,N

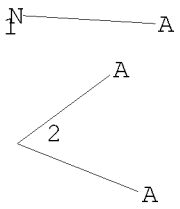
G2:O,S,[*1],[*2]

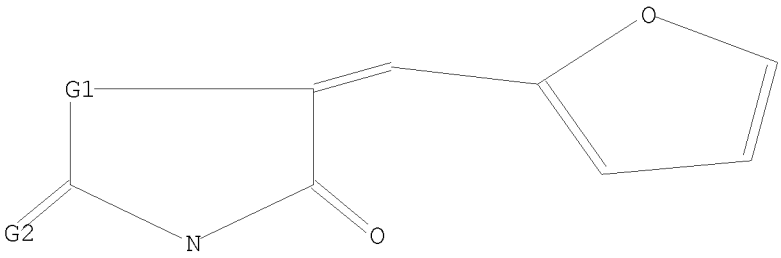
Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 8:Atom 10:CLASS 11:CLASS
12:CLASS 14:CLASS 15:CLASS 16:CLASS 19:CLASS 20:Atom 21:Atom 22:Atom
23:Atom

Searched by Jason M. Nolan, Ph.D.

L21 STRUCTURE UPLOADED

=> D
L21 HAS NO ANSWERS
L21 STR





G1 C,O,S,N

G2 O,S,[@1],[@2]

Structure attributes must be viewed using STN Express query preparation.

=> S L21 FULL SUB=L20
FULL SUBSET SEARCH INITIATED 09:01:45 FILE 'REGISTRY'
FULL SUBSET SCREEN SEARCH COMPLETED - 12943 TO ITERATE

100.0% PROCESSED 12943 ITERATIONS 9814 ANSWERS
SEARCH TIME: 00.00.01

L22 9814 SEA SUB=L20 SSS FUL L21

=> S L20 NOT L22
L23 41045 L20 NOT L22

=> FIL CAPLUS

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	221.84	746.43

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION

CA SUBSCRIBER PRICE 0.00 -1.60

FILE 'CAPLUS' ENTERED AT 09:01:59 ON 02 SEP 2008
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FILE COVERS 1907 - 2 Sep 2008 VOL 149 ISS 10
FILE LAST UPDATED: 1 Sep 2008 (20080901/ED)

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=> S L23
L24 1233 L23

=> S L22
L25 480 L22

=> S L25 AND COMPOSITION
735831 COMPOSITION
L26 8 L25 AND COMPOSITION

=> D IBIB ABS HITSTR L26 TOT

L26 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1994:430177 CAPLUS
DOCUMENT NUMBER: 121:30177
ORIGINAL REFERENCE NO.: 121:5497a,5500a
TITLE: Localization of calcium entry through calcium channels in olfactory receptor neurons using a laser scanning microscope and the calcium indicator dyes Fluo-3 and Fura-Red
AUTHOR(S): Schild, D.; Jung, A.; Schultens, H. A.
CORPORATE SOURCE: Physiologisches Inst., Univ. Goettingen, Goettingen, Germany
SOURCE: Cell Calcium (1994), 15(5), 341-8
CODEN: CECADV; ISSN: 0143-4160
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The intracellular calcium concentration [Ca2+]i in olfactory receptor neurons of

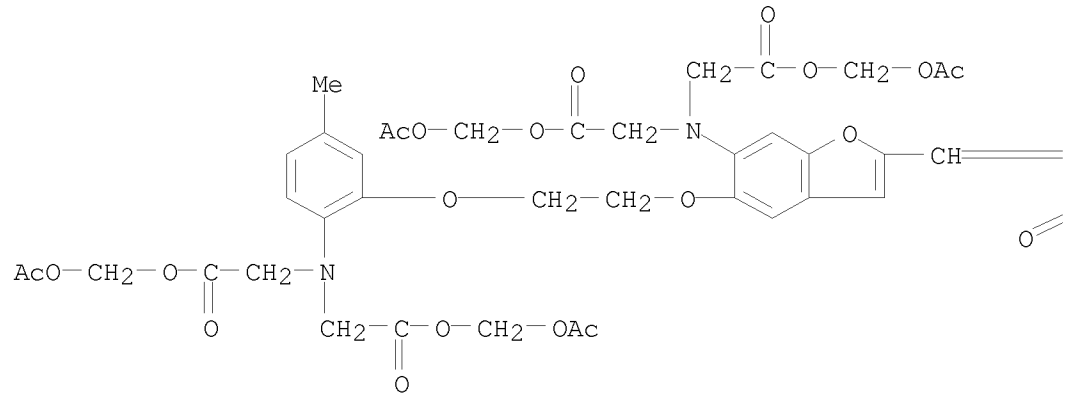
Xenopus laevis was imaged with high spatial and temporal resolution A new method using a mixture of the calcium indicator dyes Fluo-3 and Fura-Red was employed. The fluorescence patterns in two wavelength bands were measured on the emission side of a confocal laser scanning microscope, and the ratio R of the fluorescence intensities was taken as an estimate of [Ca2+]i. When the neurons were depolarized by elevating the extracellular potassium concentration [K+]0 they showed one of three types of responses: a fast increase in [Ca2+]i, a slow increase in [Ca2+]i, or no change in [Ca2+]i. The fast increase in [Ca2+]i took place in the soma compartment. For at least 4 s after the onset of depolarization the calcium distribution in the dendrite remained essentially unchanged. To study the fast increase with high time resolution, line scan images were taken. The neurons were depolarized for brief periods applying a solution containing high [K+] onto the soma from an application pipet. The fast increase in [Ca2+]i began with a delay of about 200 ms and went from the resting concentration to about 110 nM above resting concentration Following the depolarization, recovery from elevated [Ca2+]i to resting levels had a time constant of about 15 s. The slow response seemed to depend on the removal of [Na+] from the bath rather than on the elevated [K+] in the bath. The response was also observed with Cd2+, Ni2+, and Co2+ (1.5 mM each) in the bath. The fast increase in [Ca2+]i upon depolarization was never seen if R > 0.8 ([Ca2+]i > 300 nM). For R < 0.8, 45% of the cells showed a fast response. Cells that responded with a fast increase in [Ca2+]i at low resting [Ca2+]i did not do so for R > 0.8. The authors suggest that the physiol. role of calcium entry through calcium channels on the soma of olfactory cells is to decrease the membrane impedance in an activity dependent way by activating a calcium dependent potassium conductance.

IT 149732-62-7, Fura-Red
RL: ANST (Analytical study)
(Localization of calcium entry through calcium channels in olfactory receptor neurons using a laser scanning microscope and the calcium indicator dyes Fluo-3 and Fura-Red)

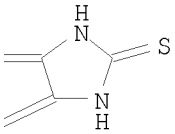
RN 149732-62-7 CAPLUS

CN Glycine, N-[2-[(acetyloxy)methoxy]-2-oxoethyl]-N-[5-[2-[2-[bis[2-[(acetyloxy)methoxy]-2-oxoethyl]amino]-5-methylphenoxy]ethoxy]-2-[(5-oxo-2-thioxo-4-imidazolidinylidene)methyl]-6-benzofuranyl]-, (acetyloxy)methyl ester (CA INDEX NAME)

PAGE 1-A

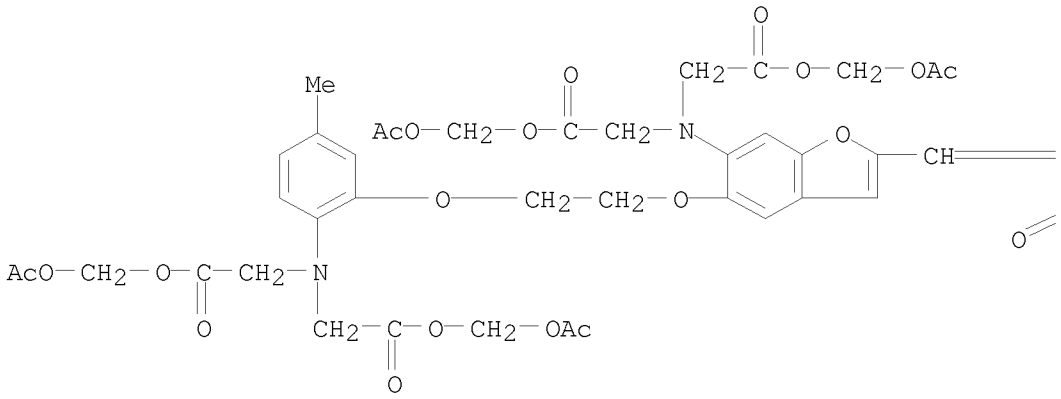


PAGE 1-B

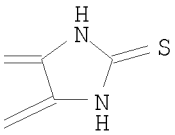


L26 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1994:212943 CAPLUS
DOCUMENT NUMBER: 120:212943
ORIGINAL REFERENCE NO.: 120:37657a,37660a
TITLE: Resting calcium in frog skeletal muscle fibers estimated with the calcium indicators fluo-3 and fura red
AUTHOR(S): Harkins, Amy B.
CORPORATE SOURCE: Univ. Pennsylvania, Philadelphia, PA, USA
SOURCE: (1993) 216 pp. Avail.: Univ. Microfilms Int., Order No. DA9321400
From: Diss. Abstr. Int. B 1993, 54(3), 1253
DOCUMENT TYPE: Dissertation
LANGUAGE: English
AB Unavailable
IT 149732-62-7, Fura red
RL: BIOL (Biological study)
(calcium determination in resting muscle by)
RN 149732-62-7 CAPLUS
CN Glycine, N-[2-[(acetyloxy)methoxy]-2-oxoethyl]-N-[5-[2-[2-[bis[2-[(acetyloxy)methoxy]-2-oxoethyl]amino]-5-methylphenoxy]ethoxy]-2-[(5-oxo-2-thioxo-4-imidazolidinylidene)methyl]-6-benzofuranyl]-, (acetyloxy)methyl ester (CA INDEX NAME)

PAGE 1-A



Searched by Jason M. Nolan, Ph.D.



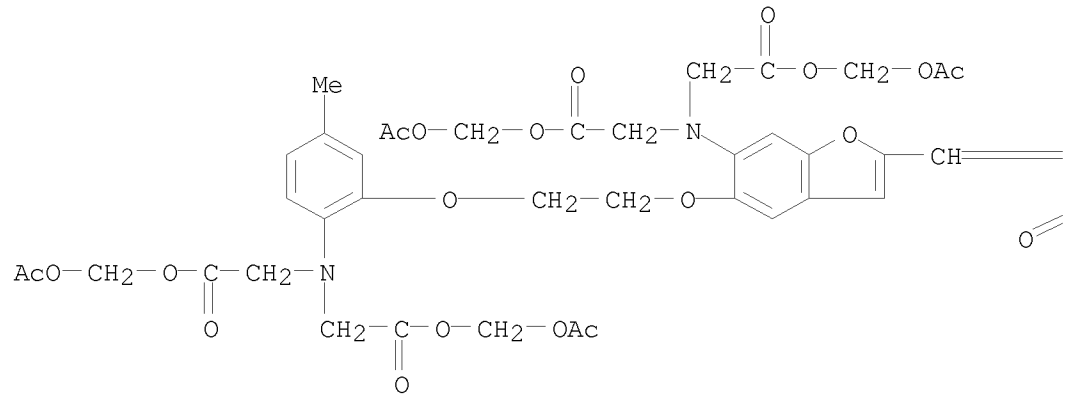
L26 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1993:534716 CAPLUS
DOCUMENT NUMBER: 119:134716
ORIGINAL REFERENCE NO.: 119:24077a,24080a
TITLE: Ratiometric confocal calcium measurements with visible wavelength indicators in isolated cardiac myocytes
AUTHOR(S): Lipp, P.; Niggli, E.
CORPORATE SOURCE: Dep. Physiol., Univ. Bern, Bern, Switz.
SOURCE: Cell Calcium (1993), 14(5), 359-72
CODEN: CECADV; ISSN: 0143-4160
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A new method for ratiometric Ca2+ measurements using indicators with excitation spectra in the visible range of wavelengths is presented. Laser-scanning confocal microscopy was used to record intracellular Ca2+ signals with high temporal and spatial resolution in single cardiac myocytes. The patch-clamp technique was applied to load the cells with the fluorescent Ca2+ indicators and to follow the membrane currents with the fluorescence signals simultaneously. Intracellular free Ca2+ concentration ([Ca2+]i) was estimated with a ratiometric method. An in vitro calibration procedure was used to convert the fluorescence ratio obtained with two different Ca2+ indicators (Fluo-3 and Fura-Red) into Ca2+ concns. Fluo-3 showed an increase in fluorescence upon a rise in intracellular Ca2+ concentration, while the Fura-Red fluorescence decreased. Since the fluorescence of Fluo-3 was around 2-fold brighter than the Fura-Red signal the cells were loaded with a 1:2 mixture of the two indicators. The large increase of the fluorescence ratio during a rise in [Ca2+]i (up to 4-fold) allowed time-resolved signals to be recorded with this mixture even when monitored in a very small subcellular volume (around 1 μm3). Long-lasting continuous recordings of the fluorescence were possible because the dye mixture exhibited no detectable bleaching with illumination periods of up to 30 s. The use of the Fluo-3/Fura-Red ratio method should significantly facilitate and improve quant. measurements of [Ca2+]i with high temporal and spatial resolution Moreover, this approach is especially valuable when used with confocal microscopes which are usually equipped with lasers in the visible light range. Furthermore, it may be possible to use the same approach with mixts. of other indicators to estimate the concentration of other biol. important ions/compds. with a ratiometric calibration.

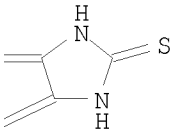
IT 149732-62-7, Fura Red
RL: ANST (Analytical study)
(fluorescence of Fluo-3 and, calcium determination in cardiac myocytes by

ratiometric confocal microscopy in relation to)
RN 149732-62-7 CAPLUS
CN Glycine, N-[2-[(acetyloxy)methoxy]-2-oxoethyl]-N-[5-[2-[2-[bis[2-[(acetyloxy)methoxy]-2-oxoethyl]amino]-5-methylphenoxy]ethoxy]-2-[(5-oxo-2-thioxo-4-imidazolidinylidene)methyl]-6-benzofuranyl]-, (acetyloxy)methyl ester (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



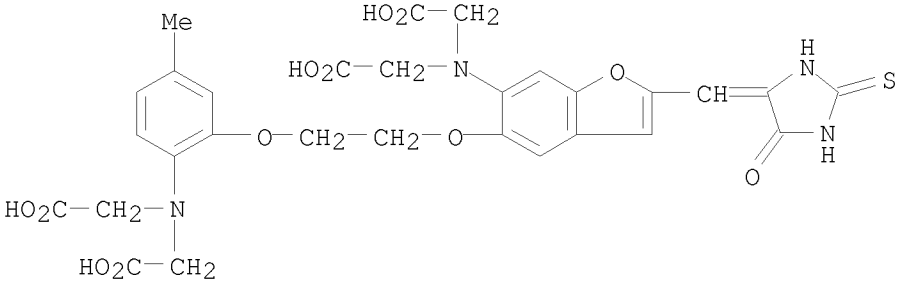
L26 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1993:467007 CAPLUS
DOCUMENT NUMBER: 119:67007
ORIGINAL REFERENCE NO.: 119:11989a,11992a
TITLE: Use of fura red as an intracellular calcium indicator in frog skeletal muscle fibers
AUTHOR(S): Kurebayashi, Nagomi; Harkins, A. B.; Baylor, S. M.
CORPORATE SOURCE: Sch. Med., Univ. Pennsylvania, Philadelphia, PA, 19104-6085, USA
SOURCE: Biophysical Journal (1993), 64(6), 1934-60
CODEN: BIOJAU; ISSN: 0006-3495
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Fura red, a fluorescent Ca2+ indicator with absorbance bands at visible wavelengths, was injected into intact single muscle fibers that had been stretched to a long sarcomere length (.apprx.3.8 μm) and bathed in a 'high-Ca2+' Ringer ([Ca2+] = 11.8 mM). From fura red's slow diffusion coefficient in myoplasm, 0.16 (±0.01, SEM) + 10-6 cm2 s-1 (N = 5;

16°C), it is estimated that .apprx.85% of the indicator mols. are bound to muscle constituents of large mol. weight Binding appears to elevate, by 3- to 4-fold, the indicator's apparent dissociation constant for Ca2+ (KD), which is estimated to be 1.1-1.6 μM in myoplasm. Fura red's myoplasmic absorbance spectrum was used to estimate fr, the fraction of fura red mols. in the Ca2+-bound form at rest. In 3 fibers thought to be minimally damaged by the micro-injection, fr was estimated to be 0.15 (±0.01). Thus, resting myoplasmic free [Ca2+] ([Ca2+]r) is estimated to be 0.19-0.28 μM. For fibers in normal Ringer solution ([Ca2+] = 1.8 mM), at shorter sarcomere length (.apprx.2.7 μM), and containing a nonperturbing concentration of indicator (≤0.2 mM), [Ca2+]r is estimated to be 0.18-0.27 μM. This range is higher than estimated previously in frog fibers with other techniques. In 6 fibers, R, the indicator's fluorescence ratio signal (equal to the emission intensity measured with 420 nm excitation divided by that measured with 480 nm excitation), was measured at rest and following elec. stimulation and compared with absorbance measurements made from the same fiber region. The anal. implies that RMiN and RMAX (the values of R that would be measured if all indicator mols. were in the Ca2+-free and Ca2+-bound states, resp.) were substantially smaller in myoplasm than in calibration solns. lacking muscle proteins. Several methods for estimation of [Ca2+]r from R are analyzed and discussed.

IT 124903-72-6
RL: ANST (Analytical study)
(in calcium determination in muscle fibers)

RN 124903-72-6 CAPLUS

CN Glycine, N-[5-[2-[2-[bis(carboxymethyl)amino]-5-methylphenoxy]ethoxy]-2-[(5-oxo-2-thioxo-4-imidazolidinylidene)methyl]-6-benzofuranyl]-N-(carboxymethyl)- (CA INDEX NAME)



L26 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

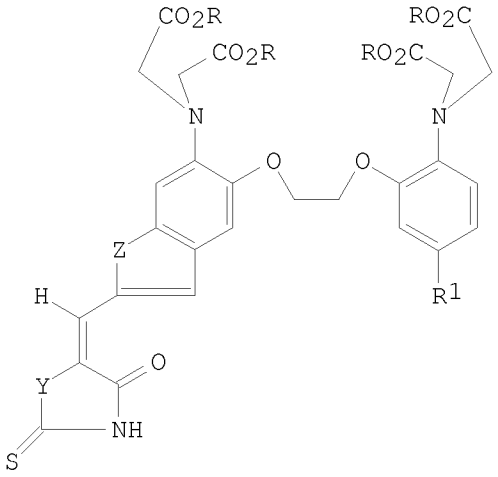
ACCESSION NUMBER:	1990:51789 CAPLUS
DOCUMENT NUMBER:	112:51789
ORIGINAL REFERENCE NO.:	112:8817a,8820a
TITLE:	New tetracarboxylate compounds as fluorescent intracellular calcium indicators
INVENTOR(S):	DeMarinis, Robert M.; Katerinopoulos, Haralambos E.; Muirhead, Katharine A.
PATENT ASSIGNEE(S):	SmithKline Beckman Corp., USA
SOURCE:	U.S., 8 pp. CODEN: USXXAM
DOCUMENT TYPE:	Patent
LANGUAGE:	English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4849362	A	19890718	US 1988-196654	19880519
EP 342891	A1	19891123	EP 1989-304872	19890515
EP 342891	B1	19940309		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
AT 102619	T	19940315	AT 1989-304872	19890515
ES 2061990	T3	19941216	ES 1989-304872	19890515
JP 02022275	A	19900125	JP 1989-127716	19890519
JP 08013812	B	19960214		
JP 08178850	A	19960712	JP 1995-171874	19950707
JP 2648293	B2	19970827		

PRIORITY APPLN. INFO.: US 1988-196654 A 19880519
EP 1989-304872 A 19890515

OTHER SOURCE(S): MARPAT 112:51789
GI

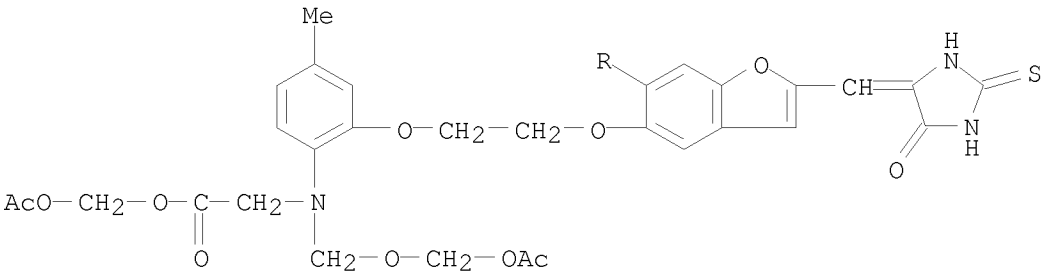


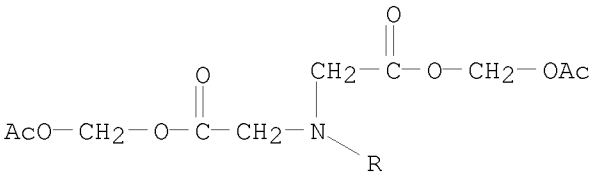
I

AB Tetracarboxylates I (R = H, AcOCH2; R1 = Me, Et; Z = O, S, NH; Y = NH, S) are chelators for Ca2+ and are useful as fluorescent indicators for measuring intracellular Ca2+ concns. I (R = AcOH2; R1 = Me; Z= O; Y = NH) was prepared from 1-(2-amino-4-benzoxylphenoxy)-2-(2'-amino-5'-methylphenoxy)ethane in 9 steps. A10 smooth muscle cells were loaded with indicator dye and analyzed by fluorescence microscopy. Laser output of 100 mW 488 nm was used to excite the fluorescence of Ca2+-free tetracarboxylate which was collected using a 640-nm longpass filter. Vasopressin-stimulated increase in intracellular Ca2+ caused a decrease in the Ca2+-free form of the carboxylate and therefore a decrease in its 488 nm excited fluorescence.

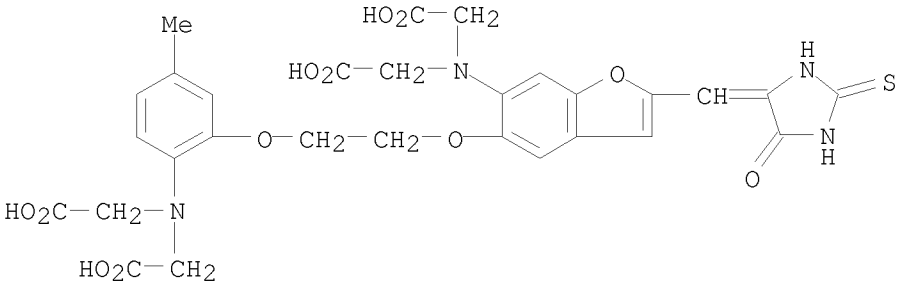
IT 124903-63-5
RL: ANST (Analytical study)
(fluorescent intracellular calcium indicator)

RN 124903-63-5 CAPLUS
CN Glycine, N-[2-[(acetyloxy)methoxy]-2-oxoethyl]-N-[5-[2-[2-[[[(acetyloxy)methoxy]methyl][2-[(acetyloxy)methoxy]-2-oxoethyl]amino]-5-methylphenoxy]ethoxy]-2-[(5-oxo-2-thioxo-4-imidazolidinylidene)methyl]-6-benzofuranyl]-, (acetyloxy)methyl ester (9CI) (CA INDEX NAME)





IT 124903-72-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, in preparation of fluorescent intracellular calcium
chelator)
RN 124903-72-6 CAPLUS
CN Glycine, N-[5-[2-[2-[bis(carboxymethyl)amino]-5-methylphenoxy]ethoxy]-2-[(5-oxo-2-thioxo-4-imidazolidinylidene)methyl]-6-benzofuranyl]-N-(carboxymethyl)- (CA INDEX NAME)



L26 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1981:609650 CAPLUS
DOCUMENT NUMBER: 95:209650
ORIGINAL REFERENCE NO.: 95:34940h,34941a
TITLE: Drug with a cytostatic effect and use of

	glycidyl-hydantoin compounds in pharmaceutical composition
INVENTOR(S):	Budnowski, Manfred; Fischer, Herbert
PATENT ASSIGNEE(S):	Henkel K.-G.a.A., Fed. Rep. Ger.
SOURCE:	Ger. Offen., 17 pp.
	CODEN: GWXXBX
DOCUMENT TYPE:	Patent
LANGUAGE:	German
FAMILY ACC. NUM. COUNT:	4
PATENT INFORMATION:	

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3003357	A1	19810806	DE 1980-3003357	19800131
EP 33503	A2	19810812	EP 1981-100544	19810126
EP 33503	A3	19820113		
EP 33503	B1	19860910		
R: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
AT 22080	T	19860915	AT 1981-100544	19810126
AU 8166761	A	19810806	AU 1981-66761	19810130
AU 543383	B2	19850418		
JP 56122313	A	19810925	JP 1981-13715	19810131

PRIORITY APPLN. INFO.:			
	DE 1980-3003356	A	19800131
	DE 1980-3003357	A	19800131
	DE 1980-3003404	A	19800131
	AT 1980-1330	A	19800310
	AT 1980-1331	A	19800310
	AT 1980-1365	A	19800312
	AT 1980-1649	A	19800327
	AT 1980-5644	A	19801117
	EP 1981-100544	A	19810126

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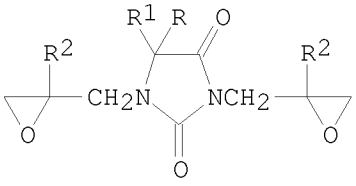
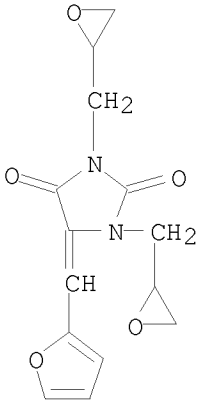


I

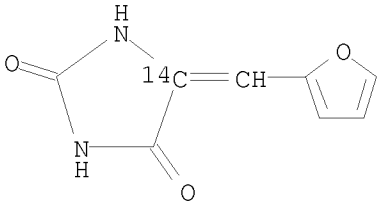
AB Cytostats, I, where R and R1 are the same or different and H or C1-12 hydrocarbon or closed to a ring, and R2 is H or C1-4 alkyl, were prepared and tested in mice inoculated with leukemia P 388 cells. Furfurylidenehydantoin [19628-38-7] and epichlorhydrin [106-89-8] were refluxed with Et4N+Br- catalyst for 4-5 h, cooled to 40-50°, mixed with alkali, and H2O was removed by azeotropic distillation After stirring 1 h at 40°, NaCl was removed and epichlorhydrin distilled, and the residue was recrystd. from iso-PrOH to give N,N'-diglycidylfurfurylidenehydantoin [79413-01-7] (yield, 65% of theory).

IT 79413-01-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and cytostatic activity of)
RN 79413-01-7 CAPLUS
CN 2,4-Imidazolidinedione, 5-(2-furanylmethylene)-1,3-bis(oxiranylmethyl)-
(9CI) (CA INDEX NAME)



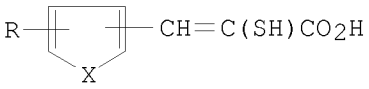
IT 19628-38-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with epichlorhydrin)
RN 19628-38-7 CAPLUS
CN 2,4-Imidazolidinedione-5-14C, 5-(2-furanylmethylene)- (9CI) (CA INDEX
NAME)



L26 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1980:41739 CAPLUS
DOCUMENT NUMBER: 92:41739
ORIGINAL REFERENCE NO.: 92:6961a,6964a
TITLE: Pharmaceutical composition useful as antidote for heavy metal poisoning
INVENTOR(S): Giroux, Eugene L.; Prakash, Nellikunja J.; Schechter, Paul J.
PATENT ASSIGNEE(S): Merrell Toraude S. A., Fr.
SOURCE: Belg., 13 pp.
CODEN: BEXXAL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BE 875232	A1	19790716	BE 1979-194334	19790330
US 4169149	A	19790925	US 1978-892187	19780331
ZA 7901524	A	19800827	ZA 1979-1524	19790330
PRIORITY APPLN. INFO.:			US 1978-892187 A	19780331
			US 1977-765420 A2	19770121

OTHER SOURCE(S): MARPAT 92:41739
GI



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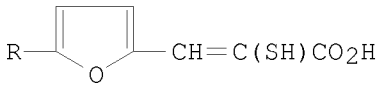


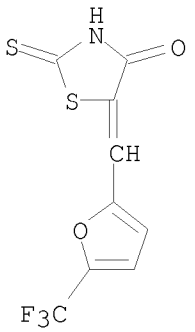
II

AB Mercaptoacrylic acid I (X = CH:CH, O, S, NH; R = H, Me, Et, OH, OMe, OEt, Cl, Br, F, I, CF3) were prepared Thus, 5-trifluoromethylfurfural was treated with rhodamine followed by alkaline hydrolysis to give II (R = CF3). II (R = H) at 25 mg/kg day protected rat against 1 mg/kg day Cd.

IT 65712-31-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrolysis of)

RN 65712-31-4 CAPLUS

CN 4-Thiazolidinone, 2-thioxo-5-[[5-(trifluoromethyl)-2-furanyl]methylene]- (CA INDEX NAME)



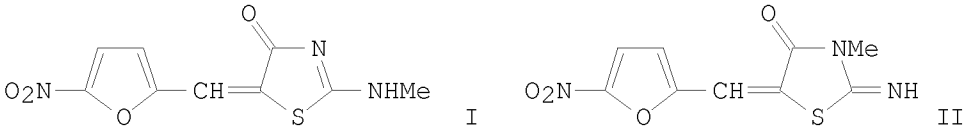
L26 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER:	1977:38591 CAPLUS
DOCUMENT NUMBER:	86:38591
ORIGINAL REFERENCE NO.:	86:6119a,6122a
TITLE:	Nitrofuran-containing composition and its use as slimicide
INVENTOR(S):	Hjelte, Nils; Sandberg, Bo
PATENT ASSIGNEE(S):	Rexolin Chemicals AB, Swed.
SOURCE:	Ger. Offen., 18 pp. CODEN: GWXXBX
DOCUMENT TYPE:	Patent
LANGUAGE:	German

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2614798	A1	19761028	DE 1976-2614798	19760406
FI 7600961	A	19761010	FI 1976-961	19760408
SE 7604170	A	19761010	SE 1976-4170	19760408
NO 7601217	A	19761012	NO 1976-1217	19760408
FR 2307081	A1	19761105	FR 1976-10283	19760408
FR 2307081	B3	19790105		

PRIORITY APPLN. INFO.: GB 1975-14640 A 19750409
GI



AB 2-Methylamino-5-(5-nitro-2-furfurylidene)thiazolin-4-one mixture with 3-methyl-2-imino-5-(5-nitro-2-furfurylidene)thiazolidin-4-one [61345-54-8] (I:II = 1:1) is a synergistic bactericide and fungicide suitable for the slime control in paper manufacture Thus 1.2 g I-II mixture/ton paper controlled bacteria and fungi in 2 machines producing 60 tons of paper daily.

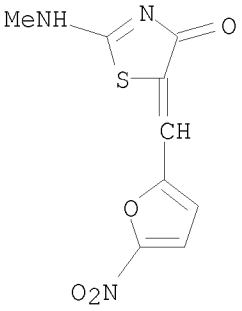
IT 61345-54-8
RL: BIOL (Biological study)
(slimicide for paper manufacture)

RN 61345-54-8 CAPLUS

CN 4(5H)-Thiazolone, 2-(methylamino)-5-[(5-nitro-2-furanyl)methylene]-, mixt. with 2-imino-3-methyl-5-[(5-nitro-2-furanyl)methylene]-4-thiazolidinone (9CI) (CA INDEX NAME)

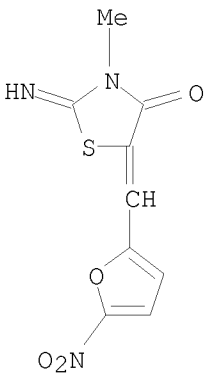
CM 1

CRN 25603-06-9
CMF C9 H7 N3 O4 S



CM 2

CRN 25580-69-2
CMF C9 H7 N3 O4 S



=> D IBIB ABS HITSTR L24 1233

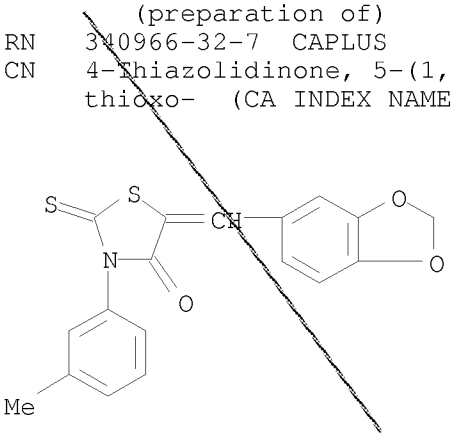
L24 ANSWER 1233 OF 1233 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1908:14948 CAPLUS
DOCUMENT NUMBER: 2:14948
ORIGINAL REFERENCE NO.: 2:3229h-i,3230a-g
TITLE: Substituted Rhodaninic Acids and their Aldehyde Condensation Products (VII)
AUTHOR(S): Andreasch, Rudolph
SOURCE: Monatshefte fuer Chemie (1908), 29, 399-419
CODEN: MOCMB7; ISSN: 0026-9247
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
GI For diagram(s), see printed CA Issue.
AB cf. Ibid., 24, 499-27, 1211. m-Tolylthiocarbamic acid, prepared by the interaction of m-toluidine, CS2, and NH3 is, in the form of its NH4 salt, allowed to act upon the Et ester of monochloracetic acid. The resulting ν-m-tolylrhodaninic acid (I), m. 148°. In the alcoholic mother liquor is found the ethyl tolyldithiocarbamylacetate, MeC5H4.NH.CS.S.CH2.COOC2H5 m. 77°. A number of condensation products were prepared from this tolylrhodaninic acid. With BzH was obtained β-benzylidene-ν-m-tolylrhodaninic acid, m. 124°; with salicylic aldehyde, β-o-oxybenzylidene-ν-m-tolylrhodaninic acid, m. 220°; with m-nitrobenzaldehyde, β-m-nitrobenzylidene-ν-m-tolylrhodaninic acid, m. 234°; with p-dimethyl aminobenzaldehyde, β-dimethyl-p-amidobenzylidene-ν-m-tolylrhodaninic acid, m. 140°, a compound which dyes wool a beautiful orange-red; with piperonal, β-methylene-dioxybenzylidene-ν-m-tolylrhodaninic acid, m. 178°; with cinnamic aldehyde, β-cinnamylidene-ν-m-tolylrhodaninic acid, m. 145-6°. When benzyldithiocarbamic acid, prepared by the action of CS2 upon benzylamine (2 mol.), is allowed to act upon Et monochloracetate, the final product is ν-benzylrhodaninic acid, m. 83°. As condensation products were prepared: with BzH, β-benzylidene-ν-benzylrhodaninic acid, m.

219°; with m-nitrobenzaldehyde, β-m-nitrobenzylidene-ν-benzylrhodaninic acid, m. 183°; with p-dimethylaminobenzaldehyde, β-dimethyl-p-aminobenzylidene-ν-benzylrhodaninic acid, m. 177°. The action of hydrazine in the presence of CS2 and EtOH gives the hydrazine dithiocarbazinate. The further action of this product upon Et monochloracetate gives ν-aminorhodaninic acid (II) m. 92°. From the mother liquor of aminorhodaninic acid was obtained a substance, m. 60°, possibly C10H14O4N2S3. The condensation of aminorhodaninic acid with m-nitrobenzaldehyde gave β-m-nitrobenzylidene-ν-aminorhodaninic acid, m. 170°; with p-dimethylaminobenzaldehyde it gave β-dimethyl-p-aminobenzylidene-ν-aminorhodaninic acid, m. 266°. In analogy with the action of H2CO3 upon the amino acids with the production of the corresponding carbamic acids, the author has substituted CS2 and obtained from these acids the corresponding dithiocarbamic acids. These latter with Et monochloracetate give substituted rhodaninic acids. Thus, from CS2 and glycocoll in Ba(OH)2, to which is finally added a small quantity of EtOH, the compound (III) is formed. The action of Et monochloracetate upon the product gives the yellow Ba rhodaninylacetate (IV). The acid contains 1 H2O, m. 145°. With aldehydes, this acid condenses in the same manner as did the other rhodaninic acids just described. From BzH was obtained β-benzylidenerhodaninylacetic acid, m. 240°; from m-nitrobenzaldehyde, β-m-nitrobenzylidenerhodaninylacetic acid, m. 270-80°; and from p-dimethylaminobenzylaldehyde, β-dimethyl-p-aminobenzylidenerhodaninylacetic acid, m. and decomposes 235°. Other amino acids such as aniline, aminobenzoic acids, etc., give the corresponding rhodaninic acids. In many cases these products are not crystalline.

IT 340966-32-7P, Rhodanine, 5-piperonylidene-3-m-tolyl-
RL: PREP (Preparation)
(preparation of)

RN 340966-32-7 CAPLUS

CN 4-Thiazolidinone, 5-(1,3-benzodioxol-5-ylmethylene)-3-(3-methylphenyl)-2-thioxo- (CA INDEX NAME)



=> D IBIB ABS HITSTR L24 1232

L24 ANSWER 1232 OF 1233 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1910:8921 CAPLUS
DOCUMENT NUMBER: 4:8921
ORIGINAL REFERENCE NO.: 4:1604b-i,1605a-b
TITLE: Substituted Rhodaninic Acids and their Aldehyde Condensation Products. VIII
AUTHOR(S): Kaluza, Ludwig

SOURCE: Graz. Manatsh. (1910), 30, 701-26
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

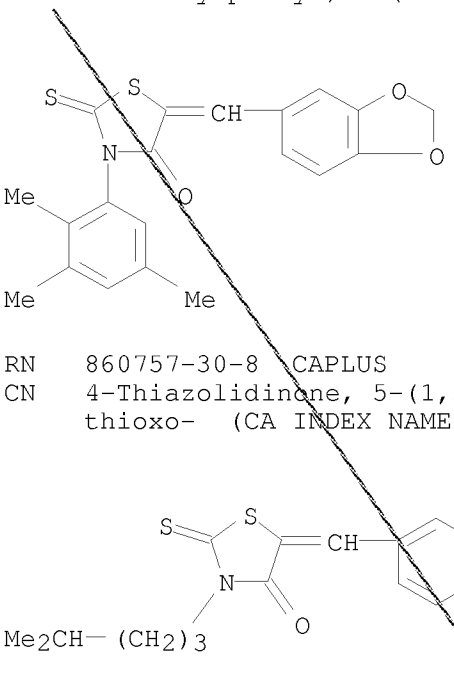
AB Among the substituted acids studied the first under consideration was ν-.vphi.-cumylrhodaninic acid (I), prepared by the action of Et monochloroacetate upon NH4 cumyldithiocarbamate. In this reaction a heavy oil separates and gives, upon standing, small colorless crystals, m. 84°, of ethyl .vphi.-cumyldithiocarbamylacetate, Me3C6H2NHCSSCH2CO2Et, an intermediate product in the rhodaninic acid synthesis. Examinations of the oily substance left after separation of the crystals just mentioned showed that the ν-.vphi.-cumylrhodaninic acid was present. It could not, however, be obtained pure. A number of its condensation products with aldehydes were prepared. β-Benzylidene-ν-.vphi.-cumylrhodaninic acid, C19H17ONS2, prepared by condensation with BzH, lemon-yellow needles, m. 127°, mol. weight 330.1. β-Methylene-3,4-dioxybenzylidene-ν-.vphi.-cumylrhodaninic acid, C20H17O3NS2, by condensation with piperonaldehyde; small needles, m. 188°. β-m-nitrobenzylidene-ν-.vphi.-cumylrhodaninic acid, C19H16N2S2O3, from m-nitrobenzaldehyde; yellow crystalline powder, m. 224°. β-p-Nitrobenzylidene-ν-.vphi.-cumylrhodaninic acid, C19H16n2S2O3, from p-nitrobenzaldehyde; dark yellow powder, m. 230° (decompose). β-Dimethyl-p-aminobenzylidene-ν-.vphi.-cumylrhodaninic acid, C21H22ON2S2, from β-dimethyl-p-aminobenzaldehyde; dark crystalline powder, m. 192°. β-p-Methoxyl-benzylidene-ν-.vphi.-cumylrhodaninic acid, C20H19O2NS2, from anisic aldehyde; chrome-yellow plates, m. 174°. The second substituted acid was ν-isohexylrhodaninic acid (II) prepared from ClCH2CO2Et upon the isohexyl isohexyldithiocarbamate, thick oil, yellow in color. A number of condensation products were prepared: β-benzylidene-ν-isohexylrhodaninic acid, C16H19NS2, from BzH; light yellow needles, m. 87°, mol. weight 282.4. β-m-Nitrobenzylidene-ν-isohexylrhodaninic acid, C16H18O3N2S2, from m-nitrobenzaldehyde; light yellow crystals, m. 166-7°. β-p-Nitrobenzylidene-ν-isohexylrhodaninic acid, C16H18O3N2S2, from p-nitrobenzaldehyde; brown-yellow crystalline powder, m. 130-1°. β-Methylene-3,4-dioxybenzylidene-v-isohexylrhodaninic acid, C17H19O3NS2, from piperonaldehyde; gold-yellow flakes, m. 98°. β-Dimethyl-p-amino-benzylidene-v-isohexylrhodaninic acid, C18H24ON2S2, from dimethyl-p-aminobenzaldehyde; red needles, m. 140°. β-o-Hydroxybenzylidene-v-isohexylrhodaninic acid, C16H19O2NS2, from salicylic aldehyde, orange-yellow needles, m. 170-2°. β-p-Methoxybenzylidene-v-isohexylrhodaninic acid, C17H21O2NS2, from anisic aldehyde; chrome-yellow needles, m. 85°. β-Cinnamylene-v-isohexylrhodaninic acid, C18H21ONS2, from cinnamic aldehyde, yellow scales, m. 129-31°. The action of Et chlorocarbonate from the isohexylisohexyldithiocarbamate was found to give isohexylisothiocyanate, C17H13NS, yellow oil, b. p. 208-9°. By the action of NH3 and EtOH it gives a white crystalline isohexylthiourea, C7H16N2S, m. 62°. With isohexylamine instead of NH3 diisohexylthiourea, C13H28N2S, crystallizing in glancing white leaflets, m. 46°, was obtained. The action of (CN)2 on isohexylthiourea and the subsequent treatment of this cyanide with HCl gave a monoisohexylthioparabanic acid (III), C9H14N2O2S; light yellow crystals m. 110°, mol. weight 197. When this product is treated with AgNO3 in EtOH or H2O, with final mixing, there was extracted by Et2O a monoisohexylparabanic acid, C9H14N2O3; small white crystals, m. 76°. In a similar manner the diisohexylthiourea was made to give

diisohexylthioparabanic acid, C15H26O2N2S; lemon-yellow needles, m. 40°. This in turn gave diisohexylparabanic acid, which however could not be prepared pure or in crystalline form.

IT 859960-24-0P, Rhodanine, 5-piperonylidene-3-pseudocumyl-
860757-30-8P, Rhodanine, 3-isohexyl-5-piperonylidene-
RL: PREP (Preparation)
(preparation of)

RN 859960-24-0 CAPLUS

CN 4-Thiazolidinone, 5-(1,3-benzodioxol-5-ylmethylene)-2-thioxo-3-(2,3,5-trimethylphenyl)- (CA INDEX NAME)



RN 860757-30-8 CAPLUS

CN 4-Thiazolidinone, 5-(1,3-benzodioxol-5-ylmethylene)-3-(4-methylpentyl)-2-thioxo- (CA INDEX NAME)

=> D IBIB ABS HITSTR L24 1231

L24 ANSWER 1231 OF 1233 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1911:9676 CAPLUS

DOCUMENT NUMBER: 5:9676

ORIGINAL REFERENCE NO.: 5:1756b-i,1757a

TITLE: Substituted Rhodanines and their Aldehyde Condensation Products. X

AUTHOR(S): Andreasch, Rudolf

SOURCE: Monatshefte fuer Chemie (1911), 31, 785-95
CODEN: MOCMB7; ISSN: 0026-9247

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

GI For diagram(s), see printed CA Issue.

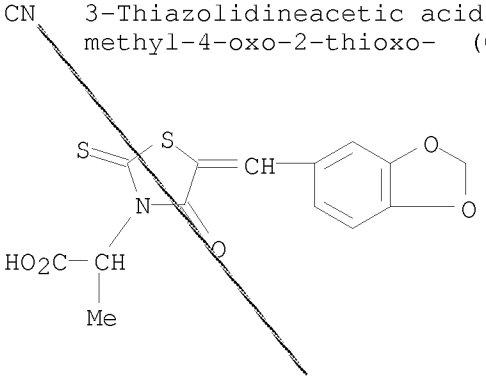
AB cf. C. A., 2, 3229. Dithiocarbaminoacetic acid HS2CNHCH2CO2H, is best prepared from aminoacetic acid, CS2 and NH3, in dilute alc., the product consists of diammonium dithiocarbaminoacetate; white needles with 1H2O, m. 110° (gas evolution). Yield, about 80%. In a similar manner, alanine forms diammonium α-dithiocarbaminopropionate, NH4S2CNHCHMeCO2NH4; long needles with 1H2O, m. 128-9° (decompose and gas evolution). When treated with HCl, or H2SO4 and Et2O it gives

α-rhodaninepropionic acid formula (I) below; warty crystals from alc., m. 127°. The above condensation may also be realized by the use of KOH, or Ba(OH)2 in place of NH3. β-Benzylidene-α-rhodaninepropionic acid (II), from (I) and BzH, in Et2O; light yellow needles, or warty aggregates from alc., m. 191°. β-p-Dimethylaminobenzylidene-α-rhodaninepropionic acid (III), from (I) and p-dimethyl-aminobenzaldehyde; needles, or crusts resembling CrO3 in color, m. 210-20°. It dyes the skin, wool and silk orange-red, but the colors are not very fast towards light. β-p-Hydroxybenzylidene-α-rhodaninepropionic acid (IV), from (I) and p-hydroxybenzaldehyde; light chrome-yellow needles or crusts, softens 190°, m. 205-10°. β-Methylenedioxybenzylidene-α-rhodaninepropionic acid, (V), from (I) and piperonaldehyde in AcOH; orange-yellow warts from alc. or Et2O, m. 197-9°. When glycylglycine hydrochloride is treated with CS2 and aqueous NH3 it appears to form the di-NH4 dithiocarbamate, NH4S2CNHCH2CONHCH2CO2NH4. It was not purified but was heated with chloroacetic ester and the product acidified and extracted with Et2O. The resulting compound consists of rhodanineglycylglycine (IV); yellow syrup. With BzH, in AcOH, it forms β-benzylidenerhodanineglycylgycine (VII); greenish yellow scales, or needles, softens 180°, m. 190°. The rhodanines from asparagine, aspartic and glutamic acids and synthetic leucine, both optically active and inactive, are all oils, as are likewise their condensation products with aldehydes. As these oils decompose when heated the compds. in question could not be purified.

IT 300812-43-5P, 3-Thiazolidineacetic acid, 4-keto-α-methyl-5-piperonylidene-2-thio-
RL: PREP (Preparation)
(preparation of)

RN 300812-43-5 CAPLUS

CN 3-Thiazolidineacetic acid, 5-(1,3-benzodioxol-5-ylmethylene)-α-methyl-4-oxo-2-thioxo- (CA INDEX NAME)



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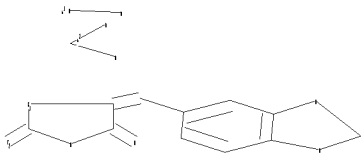

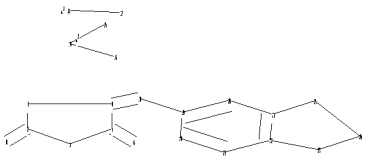

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ring nodes :
1 2 3 4 5 19 20 21 22 23 24 25 26 27
chain bonds :
2-8 4-10 5-6 10-19 11-12 14-15 14-16
ring bonds :
1-2 1-5 2-3 3-4 4-5 19-20 19-24 20-21 21-22 21-25 22-23 22-27 23-24
25-26 26-27
exact/norm bonds :
1-2 1-5 2-3 2-8 3-4 4-5 4-10 5-6 10-19 11-12 14-15 14-16 21-25 22-27
25-26 26-27
normalized bonds :
19-20 19-24 20-21 21-22 22-23 23-24

G1:C,O,S,N

G2:O,S,[*1],[*2]

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 8:Atom 10:CLASS 11:CLASS
12:CLASS 14:CLASS 15:CLASS 16:CLASS 19:Atom 20:Atom 21:Atom 22:Atom
23:CLASS 24:Atom 25:Atom 26:Atom 27:Atom

L27 STRUCTURE UPLOADED

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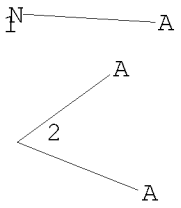
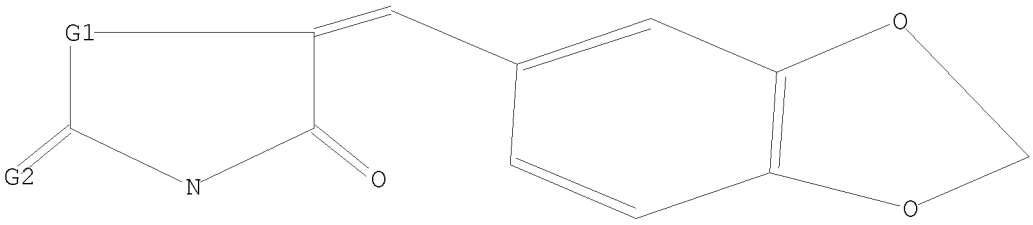
L27 HAS NO ANSWERS
L27 STR





G1 C,O,S,N

G2 O,S,[@1],[@2]

Structure attributes must be viewed using STN Express query preparation.

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REG1stRY INITIATED
Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

FULL SUBSET SEARCH INITIATED 09:10:12 FILE 'REGISTRY'
FULL SUBSET SCREEN SEARCH COMPLETED - 2970 TO ITERATE

100.0% PROCESSED 2970 ITERATIONS 2111 ANSWERS

SEARCH TIME: 00.00.01

L28 2111 SEA SUB=L23 SSS FUL L27

SUBSET IS IGNORED AS A SCOPE FOR THIS SEARCH
L29 164 L28

=> D IBIB ABS HITSTR L29 164

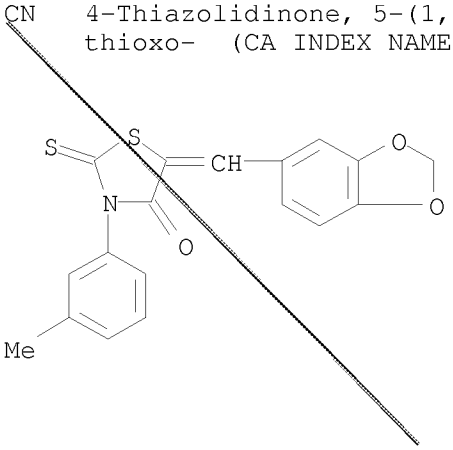
L29 ANSWER 164 OF 164 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1908:14948 CAPLUS
DOCUMENT NUMBER: 2:14948
ORIGINAL REFERENCE NO.: 2:3229h-i,3230a-g
TITLE: Substituted Rhodaninic Acids and their Aldehyde Condensation Products (VII)
AUTHOR(S): Andreasch, Rudolph
SOURCE: Monatshefte fuer Chemie (1908), 29, 399-419
CODEN: MOCMB7; ISSN: 0026-9247
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
GI For diagram(s), see printed CA Issue.
AB cf. Ibid., 24, 499-27, 1211. m-Tolylthiocarbamic acid, prepared by the interaction of m-toluidine, CS2, and NH3 is, in the form of its NH4 salt, allowed to act upon the Et ester of monochloracetic acid. The resulting ν-m-tolylrhodaninic acid (I), m. 148°. In the alcoholic mother liquor is found the ethyl tolyldithiocarbamylacetate, MeC5H4.NH.CS.S.CH2.COOC2H5 m. 77°. A number of condensation products were prepared from this tolylrhodaninic acid. With BzH was obtained β-benzylidene-ν-m-tolylrhodaninic acid, m. 124°; with salicylic aldehyde, β-o-oxybenzylidene-ν-m-tolylrhodaninic acid, m. 220°; with m-nitrobenzaldehyde, β-m-nitrobenzylidene-ν-m-tolylrhodaninic acid, m. 234°; with p-dimethyl aminobenzaldehyde, β-dimethyl-p-amidobenzylidene-ν-m-tolylrhodaninic acid, m. 140°, a compound which dyes wool a beautiful orange-red; with piperonal, β-methylene-dioxybenzylidene-ν-m-tolylrhodaninic acid, m. 178°; with cinnamic aldehyde, β-cinnamylidene-ν-m-tolylrhodaninic acid, m. 145-6°. When benzyldithiocarbamic acid, prepared by the action of CS2 upon benzylamine (2 mol.), is allowed to act upon Et monochloracetate, the final product is ν-benzylrhodaninic acid, m. 83°. As condensation products were prepared: with BzH, β-benzylidene-ν-benzylrhodaninic acid, m. 219°; with m-nitrobenzaldehyde, β-m-nitrobenzylidene-ν-benzylrhodaninic acid, m. 183°; with p-dimethylaminobenzaldehyde, β-dimethyl-p-aminobenzylidene-ν-benzylrhodaninic acid, m. 177°. The action of hydrazine in the presence of CS2 and EtOH gives the hydrazine dithiocarbazinate. The further action of this product upon Et monochloracetate gives ν-aminorhodaninic acid (II) m. 92°. From the mother liquor of aminorhodaninic acid was obtained a substance, m. 60°, possibly C10H14O4N2S3. The condensation of aminorhodaninic acid with m-nitrobenzaldehyde gave β-m-nitrobenzylidene-ν-aminorhodaninic acid, m. 170°; with p-dimethylaminobenzaldehyde it gave β-dimethyl-p-aminobenzylidene-ν-aminorhodaninic acid, m. 266°. In analogy with the action of H2CO3 upon the amino acids with the production of the corresponding carbamic acids, the author has substituted CS2 and obtained from these

acids the corresponding dithiocarbamic acids. These latter with Et monochloracetate give substituted rhodaninic acids. Thus, from CS2 and glycocoll in Ba(OH)2, to which is finally added a small quantity of EtOH, the compound (III) is formed. The action of Et monochloracetate upon the product gives the yellow Ba rhodaninylacetate (IV). The acid contains 1 H2O, m. 145°. With aldehydes, this acid condenses in the same manner as did the other rhodaninic acids just described. From BzH was obtained β-benzylidenerhodaninylacetic acid, m. 240°; from m-nitrobenzaldehyde, β-m-nitrobenzylidenerhodaninylacetic acid, m. 270-80°; and from p-dimethylaminobenzylaldehyde, β-dimethyl-p-aminobenzylidenerhodaninylacetic acid, m. and decomposes 235°. Other amino acids such as aniline, aminobenzoic acids, etc., give the corresponding rhodaninic acids. In many cases these products are not crystalline.

IT 340966-32-7P, Rhodanine, 5-piperonylidene-3-m-tolyl-
RL: PREP (Preparation)
(preparation of)

RN 340966-32-7 CAPLUS

CN 4-Thiazolidinone, 5-(1,3-benzodioxol-5-ylmethylene)-3-(3-methylphenyl)-2-thioxo- (CA INDEX NAME)



=> S L24 NOT L29
L30 1069 L24 NOT L29

=> D IBIB ABS HITSTR L30 1069

L30 ANSWER 1069 OF 1069 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1924:16150 CAPLUS
DOCUMENT NUMBER: 18:16150
ORIGINAL REFERENCE NO.: 18:2166d-e
TITLE: Use of rhodanine in organic syntheses. IV. Indole- and furylpyroracemic acids
AUTHOR(S): Granacher, Ch.; Gero, M.; Schelling, V.
SOURCE: Helvetica Chimica Acta (1924), 7, 575-8
CODEN: HCACAV; ISSN: 0018-019X
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

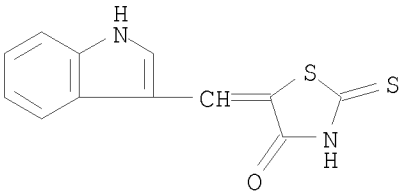
AB cf. C. A. 17, 2424. β-Indolalrhodanine, glistening brown leaflets, which gradually decompose above 200°. Heated with 10% KOH for 1-2 hrs., it gives β-indole-α-sulfhydryl-acrylic acid, orange-yellow, decomps. 190°. The NH4OH solution gives with FeCl3 a typical dark green color. With concentrated NH4OH on the H2O bath this gives β-indole-pyroracemic acid (Ellinger and Matsuoka, C. A. 16, 951). Furylsulfhydrylacrylic acid cannot be directly changed into

furylpyroracemic acid, m. 131°, by heating with NH3 but is transformed into the oxime and this is decomposed by H2SO8. The acid is very unstable and in a few days gives a greenish yellow or dark resinous mass.

IT 73855-59-1P, Rhodanine, 5-(3-indylmethylene)-
RL: PREP (Preparation)
(preparation of)

RN 73855-59-1 CAPLUS

CN 4-Thiazolidinone, 5-(1H-indol-3-ylmethylene)-2-thioxo- (CA INDEX NAME)



=> D IBIB ABS HITSTR L30 1068

L30 ANSWER 1068 OF 1069 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1925:4555 CAPLUS

DOCUMENT NUMBER: 19:4555

ORIGINAL REFERENCE NO.: 19:637g-i

TITLE: Hydantoins. XLIII. Synthesis of the polypeptide-hydantoin: "hydantoin-3-acetic acid."

AUTHOR(S): Johnson, T. B.; Renfrew, Alice G.

SOURCE: Journal of the American Chemical Society (1925), 47, 240-5
CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE: Journal

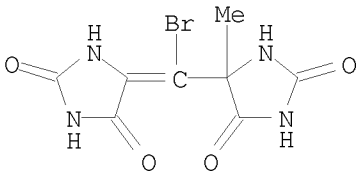
LANGUAGE: Unavailable

AB SCNCH2CO2Et (I) (for which a practical method of preparation is given) reacts with EtOH after heating 9 hrs. at 125° to give di-Et thioncarbamoacetate, b10 135-40° (with considerable decomposition). I and H2NCH2CO2Et in anhydrous Et2O give a mixture of di-Et thioureadiacetate (II), m. 85-7°, and the mono-Et ester, m. 96°, separated from II by its greater solubility in 50% AcOH. Either ester with HCl yields 2-thiohydantoin-3-acetic acid (III), yellow, m. 210-2° to a yellow oil; the alkali solution is wine-red. This is desulfurized by ClCH2CO2H, giving hydantoin-3-acetic acid, m. 190-1°. III is also obtained in good yield from I and H2NCH2CO2H after repeated evaporation with HCl.

IT 871893-67-3P, Hydantoin, 5-[bromo(2,3,4,5-tetrahydro-2,5-diketo-4-methyl-4-imidazolyl)methylene]-
RL: PREP (Preparation)
(preparation of)

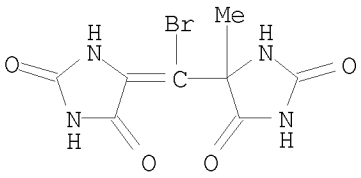
RN 871893-67-3 CAPLUS

CN Hydantoin, 5-[bromo(2,3,4,5-tetrahydro-2,5-diketo-4-methyl-4-imidazolyl)methylene]- (2CI) (CA INDEX NAME)



=> D IBIB ABS HITSTR L30 1067

L30 ANSWER 1067 OF 1069 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1925:4556 CAPLUS
DOCUMENT NUMBER: 19:4556
ORIGINAL REFERENCE NO.: 19:637i
TITLE: Hydantoins. XLIV. Pyvuril and dipyruvic triureide
AUTHOR(S): Davidson, David
SOURCE: Journal of the American Chemical Society (1925), 47, 255-9
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Pyvuril (Grimaux, Ann. chim. phys. [5] 11, 367) reacts with 1 mol. Br in AcOH to give CO(NH2)2 and bromopyruvic ureide and with 2 mols. to give CO(NH2)2 and the di-Br derivative This is analogous to the action of HNO3. HI gives 5-methylhydantoin, which confirms the intermediate existence of pyruvic monoureide; this has not been isolated on account of its reactivity, undergoing polymerization to dipyruvic acid. Concentrated H2SO4 gives dipyruvic ureide, m. 290°, whose Br derivative, C8H7BrN4O4, m. 265° (decomposition). Similar results were obtained with dipyruvic triureide.
IT 871893-67-3P, Hydantoin, 5-[bromo(2,3,4,5-tetrahydro-2,5-diketo-4-methyl-4-imidazolyl)methylene]-
RL: PREP (Preparation)
(preparation of)
RN 871893-67-3 CAPLUS
CN Hydantoin, 5-[bromo(2,3,4,5-tetrahydro-2,5-diketo-4-methyl-4-imidazolyl)methylene]- (2CI) (CA INDEX NAME)



=> D IBIB ABS HITSTR L30 1066

L30 ANSWER 1066 OF 1069 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1925:6026 CAPLUS
DOCUMENT NUMBER: 19:6026

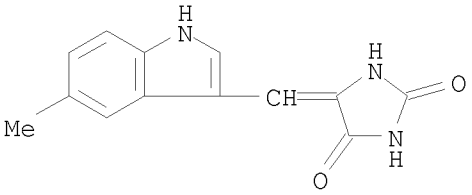
ORIGINAL REFERENCE NO.: 19:830a-f
TITLE: The metabolism of tryptophan. I. The synthesis of racemic bz-3-methyltryptophan
AUTHOR(S): Robson, Wm.
SOURCE: Journal of Biological Chemistry (1924), 62, 495-514
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB A good yield of p-tolylhydrazine is to be obtained only if the temperature is kept at 0-2°. This was then combined with AcCO2H to yield pyruvic acid p-tolylhydrazone, m. 159° (yield 88%), which was treated in 7 parts absolute EtOH at 65-70° with a rapid stream of dry HCl. After 2 hrs. the mixture was allowed to cool and was then poured into a large volume of H2O. After filtering and drying, it was distilled 2-Carboxy-5-methylindole, b4.0 236°, m. 163° (yield 60%). This was hydrolyzed with EtOH-KOH, the acid liberated by acidification and extracted with Et2O. The Et2O solution was dried with Na2SO4, filtered and then treated with a rapid stream of dry NH3. NH4 5-methylindole-2-carboxylate began to sep. as a light yellow powder almost immediately. After saturation, the mixture was allowed to stand 2 or 3 hrs. and was then filtered. Ten g. of the dry NH4 salt were then placed in a 1-l. flask and heated, under a long air condenser, at 230-40° for 30 min. After distillation in steam, 5-methylindole, m. 58.5°, separated, yield 3.9 g. This could be converted into 5-methylindole-3-aldehyde, m. 148°, by Ellinger and Flamand's method (C. A. 1, 2480), with a yield of 1.2 g. from 9 g. methylindole, and a recovery of 4.6 g. unchanged methylindole and the formation of 3-chloro-6-methylquinoline, m. 85.5°, has an odor resembling lilac. A 1.15 g. yield of a purer 5-methylindole-3-aldehyde, m. 151°, was obtained by the method of Majima and Kotake (C. A. 17, 1017) from 6.5 g. methylindole but no unchanged methylindole was recovered. In a 3rd method, 2-carbethoxy-5-methylindole was converted into 2-carboxy-5-methylindole-3-aldehyde, m. 189°, by Adams and Levine's modification of the Gatterman method (C. A. 17, 3867). On hydrolysis with 40% NaOH for 15 min. and reacidification, 2-carboxy-5-methylindole-3-aldehyde was precipitated After solution in NH°4OH and repptn. this turned brown at 235° and decomposed violently at 254-5°. Attempts at the preparation of 5-methylindole-3-aldehyde from this were unsuccessful. 5-Methylindolalhydantoin, from the 3-aldehyde, hydantoin, NaOAc and Ac2O (cf. Majima and Kotake, loc. cit.) m. 295-8°. This in 0.5 NaOH was reduced with Na-Hg to 5-methylindolylhydantylmethane, m. 206-7°. This was then hydrolyzed with Ba(OH)2, the Ba precipitated with H2SO4, and the bz-3-methyltryptophan, precipitated with HgSO4. The precipitate was filtered out, decomposed in dilute Ba(OH)2 with H2S, filtered, the Ba removed with H2SO4 and the filtrate evaporated in vacuo. EtOH precipitated a semicryst. mass, which was redissolved in H2O, repptd. with EtOH, and recrystd. from 50% EtOH. Yield 0.39 g. from 1.2 g. of the hydantylmethane. bz-3-Methyltryptophan, m. 259-63°, gives a beautiful purple with the Hopkins-Cole reagent; a purple color, which may be extracted with BuOH, with Br2-H2O; a strong reaction with triketohydrindene hydrate and is very bitter.

IT 857767-36-3P, Hydantoin, 5-(5-methyl-3-indylmethylene)-
RL: PREP (Preparation)
(preparation of)

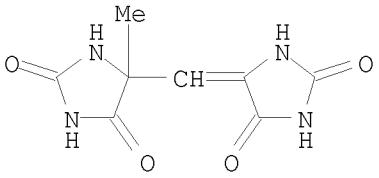
RN 857767-36-3 CAPLUS
CN 2,4-Imidazolidinedione, 5-[(5-methyl-1H-indol-3-yl)methylene]- (CA INDEX

NAME)

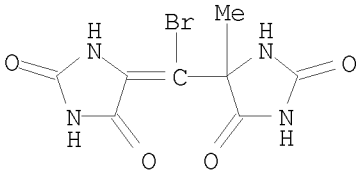


=> D IBIB ABS HITSTR L30 1065

L30 ANSWER 1065 OF 1069 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1925:7147 CAPLUS
DOCUMENT NUMBER: 19:7147
ORIGINAL REFERENCE NO.: 19:973b-d
TITLE: Hydantoins. XLV. Dipyruvic ureide
AUTHOR(S): Davidson, David; Johnson, T. B.
SOURCE: Journal of the American Chemical Society (1925), 47, 561-7
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
GI For diagram(s), see printed CA Issue.
AB cf. C. A. 19, 637. Dipyruvic ureide (I), HN.CO.NH.CO.C:CHCMe.CO.NH.CO.NH, may be obtained from pyruvil or dipyruvic triureide by the action of H2SO4, HBr or HCl; 6.4 g. result by adding to 10 g. pyruvic acid and 15 g. CO(NH2)2 in 15 cc. concentrated HCl, after 36 hrs., 17 g. concentrated H2SO4. Reduction with Pt and H in glacial AcOH gives the hydro derivative, C8H10O4N4, m. about 300° (decomposition). I (4.5 g.) in 25 cc. glacial AcOH, treated on the H2O bath with 2 cc. Br, gives about 5 g. Br derivative (II), C8H7O4N4Br, decomps. about 265-70°. Warming I with Br water gives bromomethenyl-5'-[5'-methyl]hydantoin-5-hydantoic acid, crystallizing with 3H2O, which is lost on the hot plate, giving feathery needles of the anhydrous compound Heated on the steam bath with concentrated H2SO4, II is formed. Br water reacts with II to give the di-Br derivative, hexagonal plates, m. about 250° (decomposition); soluble in about 17 parts boiling H2O. Concentrated HNO3 gives with I nitropyruvic ureide and parabanic acid.
IT 861323-75-3P, Hydantoin, 5-[(2,3,4,5-tetrahydro-2,5-diketo-4-methyl-4-imidazolyl)methylene]- 871893-67-3P, Hydantoin, 5-[bromo(2,3,4,5-tetrahydro-2,5-diketo-4-methyl-4-imidazolyl)methylene]-
RL: PREP (Preparation)
(preparation of)
RN 861323-75-3 CAPLUS
CN Hydantoin, 5-[(2,3,4,5-tetrahydro-2,5-diketo-4-methyl-4-imidazolyl)methylene]- (2CI) (CA INDEX NAME)



RN 871893-67-3 CAPLUS
CN Hydantoin, 5-[bromo(2,3,4,5-tetrahydro-2,5-diketo-4-methyl-4-imidazolyl)methylene]- (2CI) (CA INDEX NAME)



=> D IBIB ABS HITSTR L30 1064

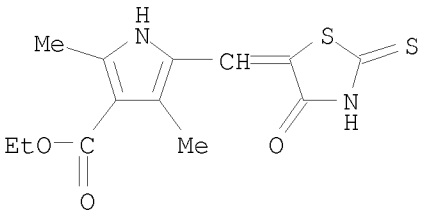
L30 ANSWER 1064 OF 1069 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1928:4734 CAPLUS
DOCUMENT NUMBER: 22:4734
ORIGINAL REFERENCE NO.: 22:588f-i,589a
TITLE: Some pyrrole derivatives. II
AUTHOR(S): Kuster, Wm.; Koppenhofer, G.
SOURCE: Z. physiol. Chem. (1927), 172, 126-37
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Synthetic pyrrylamino acids are of interest in connection with the study of the prosthetic group of the blood pigment. The condensation of formylpyrrole derivs. with diketopiperazine, followed by hydrogenation and opening of the anhydride ring, affords a method for preparing alanine derivs. of this type. 2,2-Di[3,5-dimethyl-4-carbethoxypyrral]-2,5-diketopiperazine (I), red crystals, m. 268-9°, was obtained in 60% yield by refluxing a mixture of 3,5-dimethyl-4-carbethoxy-2-formylpyrrole and glycine anhydride with AcOH and NaOAc. Its di-Me derivative, red crystals, m. 156°, was prepared by treating the Ag salt of I with MeI. Reduction of I in EtOH by Al-Hg and neutralization with dilute H2SO4 gave an almost quant. yield of colorless 2,2-di[3,5-dimethyl-4-carbethoxypyrrylmethyl]-2,5-diketopiperazine (II), m. 122°. Attempts to prepare a monopyrral derivative of diketopiperazine were unsuccessful, both CH2 groups of the latter being equally reactive. Hydrolysis of II by Ba(OH)2 gave 55% of β-[3,5-dimethyl-4-carbethoxypyrryl-2]-alanine (III), which decomps. 180-6° and does not form a Cu salt. Another method of preparing III consists in condensing the formylpyrrole with rhodanin, hydrolyzing the rhodanin ring, converting the resulting thioketonic acid into the oxime and reducing the latter. 3,6-Dimethyl-4-carbethoxy-2-pyrralrhodanin (IV), red needles, m. 253-5°, was obtained in 80% yield by refluxing the formylpyrrole and rhodanin with AcOH and NaOAc; phenylhydrazone, red needles, m.

272-5° (decomposition). Hydrolysis of IV by Ba(OH)2 converted it into 3,5-dimethyl-4-carbethoxy-2-pyrrylthiopyruvic acid (V), decomps. 196°; oxime, m. 218°. Reduction of the oxime by Na-Hg in the presence of lactic acid gave 62% of III. Hydrolysis of the CS group in V by heating in a sealed tube with ClCH2CO2H converted it into 3,5-dimethyl-4-carbethoxy-2-pyrrylpyruvic acid, m. 192°. 1-Phenyl-2,5-dimethyl-3-carbethoxypyrrole was condensed with aminoacetal by heating with concentrated HCl, forming di[1-phenyl-2,5-dimethyl-3-carbethoxy-4-pyrryl]-β-aminoethane, m. 246°. Similarly, 1-phenyl-2,5-dimethyl-4-carbethoxypyrrole with CH2O and HCl yielded di[1-phenyl-2,5-dimethyl-4-carbethoxy-3-pyrryl]methane, m. 102°.

IT 856076-91-0P, 3-Pyrrolecarboxylic acid, 5-(2,3-dihydro-4-keto-2-thioketo-5(4)-thiazylidenemethyl)-2,4-dimethyl-, ethyl ester
RL: PREP (Preparation)
(preparation of)

RN 856076-91-0 CAPLUS

CN INDEX NAME NOT YET ASSIGNED



=> D IBIB ABS HITSTR L30 1063

L30 ANSWER 1063 OF 1069 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1938:14713 CAPLUS

DOCUMENT NUMBER: 32:14713

ORIGINAL REFERENCE NO.: 32:2114h-i,2115a-c

TITLE: Synthesis of r-6-methoxytryptophan and of harmine, with a note on the action of acetaldehyde on tryptophan

AUTHOR(S): Harvey, Douglas G.; Robson, Wm.

SOURCE: Journal of the Chemical Society (1938) 97-101
CODEN: JCSOA9; ISSN: 0368-1769

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

OTHER SOURCE(S): CASREACT 32:14713

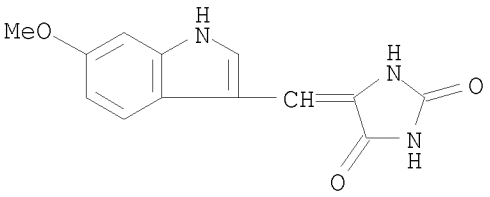
AB Details are given of the preparation of the following intermediates: o-nitro-p-cresol, o-nitro-p-tolyl Me ether, the K derivative of Et o-nitro-p-methoxyphenyl-pyruvate, NH4 6-methoxyindole-2-carboxylate, 6-methoxyindole and 6-methoxyindole-3-aldehyde (I) (the last being accompanied with some 3-chloro-7-methoxy-quinoline). Heating 3.5 g. I, 2.3 g. hydantoin and 10 ml. piperidine under reflux for 35 min. gives 3.7 g. 5-(6'-methoxyindolal)-hydantoin (II), yellow, m. 311-15°; it gives, when heated with Ehrlich's reagent, a very pale pink color which fades rapidly on cooling. Reduction of 1 g. of II in pyridine with H2S by heating at 100° for 70 hrs. gives 0.45 g. of 5-(6'-

methoxyindolylmethyl)hydantoin, m. 220° (50% yield on basis of recovered II); cleavage by heating with dilute NH4OH at 100-10° for 72 hrs. gives 60% of 6-methoxytryptophan (III), m. 263-8°, decomps. 274°; it has an intensely sweet taste, gives a greenish blue color with the Hopkins-Cole reagent, changed to purplish red with FeCl3 and to a vivid green-blue on dilution; Br in H2O gives a characteristic rose-pink color, readily removed by AmOH or BuOH; attempted demethylation with HCl or H2SO4 gives dark brown or green amorphous products. It would appear that before the HO derivative (which, with III, is considered a biol. precursor of the Harmala alkaloids), can be obtained, a new method of synthesizing tryptophan (IV) will be necessary. l-IV and AcH in H2O, 12 hrs. at room temperature, give a quant. yield of 3-methyl-3,4,5,6-tetrahydro-4-carboline-5-carboxylic acid (V), m. 295-9°; oxidation gives 70% of harman. Similarly, III and AcH in H2O, gently warmed for 10 min., give the 11-MeO derivative of V, with 1 mol. H2O, m. 244-6°; oxidation gives 40% of harmine. Attempts to decarboxylate V have been unsuccessful, which would indicate that the tetrahydropyridine ring is formed after, rather than before decarboxylation has occurred.

IT 858786-93-3P, Hydantoin, 5-(6-methoxy-3-indolylmethylene)-
RL: PREP (Preparation)
(preparation of)

RN 858786-93-3 CAPLUS

CN 2,4-Imidazolidinedione, 5-[(6-methoxy-1H-indol-3-yl)methylene]- (CA INDEX NAME)



=> D IBIB ABS HITSTR L30 1062

L30 ANSWER 1062 OF 1069 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1939:8714 CAPLUS
DOCUMENT NUMBER: 33:8714
ORIGINAL REFERENCE NO.: 33:1316h-i,1317a
TITLE: Synthesis of r-α-methylamino-β-3-indolylpropionic acid
AUTHOR(S): Miller, Eric J.; Robson, Wm.
SOURCE: Journal of the Chemical Society (1938) 1910-12
CODEN: JCSOA9; ISSN: 0368-1769
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

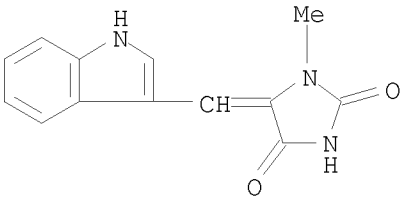
AB Glycine (19 g.) in 375 ml. of 2 N NaOH and 40 mols. of PhSO2Cl (mixed with shaking), treated with 25 g. of solid NaOH and 48 ml. Me2SO4, give 87.5% of N-benzenesulfonylsarcosine (I). I (40 g.), refluxed with 95 ml. 50% H2SO4 for 4-5 hrs., gives 1-methylglycine which with 14 g. KCNO yields 72% of 1-methylhydantoin (II), m. 157-9°. Refluxing 5 g. of indole-3-aldehyde, 5 g. II and 10 ml. piperidine for 1 hr. gives a quant. yield of 5-(3'-indolal)-1-methylhydantoin (III), m. 337-8°.

Reduction of III with H2S and concentrated NH4OH (heating at 100-5° for 3 days and repeating the procedure twice) gives 80% of the 5-(3'-indolylmethyl) derivative, m. 211-12°, which was hydrolyzed by refluxing with Ba(OH)2 for 20 hrs., giving 90% of α-methylamino-β-3-indolylpropionic acid, m. 245° (decomposition).

IT 91902-09-9P, Hydantoin, 5-(3-indolylmethylene)-1-methyl-
RL: PREP (Preparation)
(preparation of)

RN 91902-09-9 CAPLUS

CN Hydantoin, 5-(indol-3-ylmethylene)-1-methyl- (7CI) (CA INDEX NAME)



=>

---Logging off of STN---

=>
Executing the logoff script...

=> LOG Y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	52.89	908.97
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-7.20	-16.80

STN INTERNATIONAL LOGOFF AT 09:15:13 ON 02 SEP 2008